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# **THE ARCHITECTURAL RECORD**

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# THE ARCHITECTURAL RECORD

VOLUME 78 NUMBER 1 JULY, 1935

STEPHEN F. VOORHEES, NEW PRESIDENT OF AMERICAN INSTITUTE OF ARCHITECTS. Photograph by Pirie MacDonald

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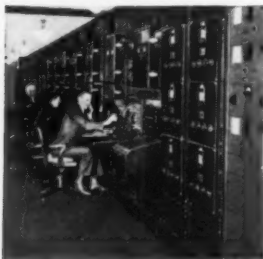


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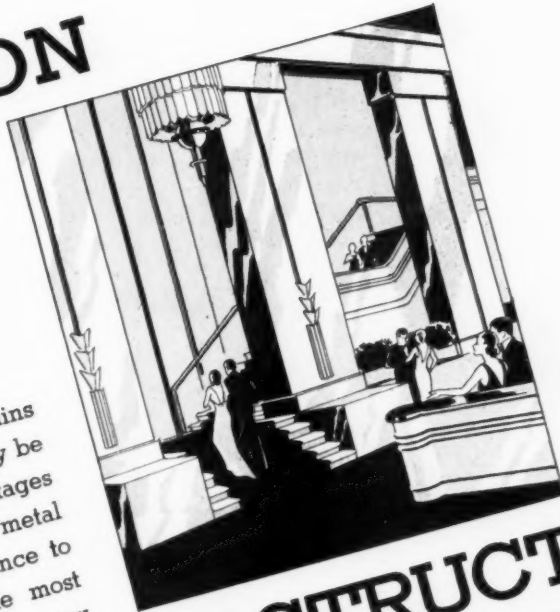
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## NEWS OF THE FIELD

Whitehouse, Stanton and Church, architects, have dissolved their partnership. Glenn Stanton has opened an office for the practice of architecture at 528 Railway Exchange Building, Portland, Oregon; Morris H. Whitehouse and Walter E. Church will continue to practice architecture at 619 Railway Exchange Building, as Whitehouse and Church.

Thos. J. Biggs, Jr., architect, is in charge of a field architectural office at Poplarville, Mississippi, for the development of Pearl River Rural Industrial Community.

Honoring A. H. Albertson, Joseph W. Wilson and Paul Richardson on the completion of 25 years of architectural practice together, former employees, close friends and engineering associates of the three tendered them a surprise banquet Saturday evening, May 18. Architect Arthur Loveless was toastmaster. The principal address of the evening was given by Prof. W. R. B. Willcox, head of the college of architecture of the University of Oregon.

The Chicago Architectural Club has elected the following men to hold office during the coming year: Ralph Gross, president; Evald A. Young, vice-president; Thomas J. Mulig, secretary; John McPherson, treasurer; and Henry Bresen, Charles Konsevic, George Recher, Albert J. Delong, Wm. F. Thomson, Lee D. Barbiers, directors.

Election of Hobart B. Upjohn, designer of church and college buildings, as president of the New York Chapter of the American Institute of Architects is announced. He succeeds Ralph Walker, who served two terms. Other officers chosen were: Gerald A. Holmes, vice-president; Frederick G. Frost, secretary; Daniel P. Higgins, treasurer; Harvey Stevenson, recorder. Mr. Walker and Robert B. O'Connor were elected to the executive committee. Mr. O'Connor becomes chairman of the Committee on Professional Practice, which also includes Frederick L. Ackerman and Eric Gugler. The following were named to the jury for the Chapter's Medal of Honor: William Adams Delano, Thomas Harlan Ellett, J. André Fouilhoux, Lawrence Grant White. Grosvenor Atterbury and Otto Eggers will serve on the Committee on Fellows until 1938. L. Murray Franklin will head the Committee on Nominations, which also includes Charles Butler and William Platt.

### TERRA COTTA WALL BLOCK COMPETITION

Architects, architectural draftsmen, designers, and students residing in the sixteen middle western states, in the area from Ohio to Nebraska and Minnesota to Arkansas, are invited to participate in a "Terra Cotta Wall Block competition," under the auspices of the Chicago Architectural Club. Prizes totaling \$500 will be awarded to the winners through the generosity of the American Terra Cotta Company and the Northwestern Terra Cotta Corporation of Chicago.

Programs will be issued July 15, with the finished drawings due on midnight, September 16. Pro-

### CALENDAR OF EXHIBITIONS AND EVENTS

July 1	Preliminary competition for Memorial Civic Auditorium and City Building in connection with Northwest Territory Celebration at Marietta, Ohio. For program, write to the professional adviser—Howard Dwight Smith, Architectural School of Ohio State University at Columbus, Ohio.
July 15	Programs issued for "Terra Cotta Wall Block Competition," sponsored by Chicago Architectural Club, 1801 South Prairie Avenue, Chicago.
July 16-20	Fourteenth International Housing and Town Planning Congress in London.
August 12	Closing date for Modernize-Main-Street competition conducted by The Architectural Record and sponsored by the Libbey-Owens-Ford Glass Company of Toledo.
August 26	Jury judgment of entries in Modernize-Main-Street competition conducted by The Architectural Record and sponsored by the Libbey-Owens-Ford Glass Company of Toledo.
September 16	Closing date for entries in "Terra Cotta Wall Block Competition," sponsored by Chicago Architectural Club, 1801 South Prairie Avenue, Chicago.
October 10-19	Architectural League Exhibition, Grand Central Palace, New York City.
October 15	Closing date of eighth annual small house competition conducted by House Beautiful magazine, 572 Madison Avenue, New York City. Rules and conditions sent on application.

grams may be secured by writing to the "Terra Cotta Wall Block Competition Committee," Chicago Architectural Club, 1801 S. Prairie Avenue, Chicago, Ill. Each request must state whether applicant is an architect, architectural draftsman, designer or student.

### COMPETITION FOR MEMORIAL AUDITORIUM

Marietta, Ohio, proposes an architectural competition for a Memorial Civic Auditorium and City Building in commemoration of the Ordinance of 1787. (Proposed cost approximately \$250,000.) The memorial building will be a feature of the 1937-38 celebration.

Competition opens July 1 and will consist of preliminary and final, each of thirty days duration, and limited to A.I.A. members. First prize is a fee of 5% on buildings; second prize, \$1,000; third prize, \$750; fourth prize, \$500.

Howard Dwight Smith of the Architectural School of Ohio State University at Columbus, Ohio, is architectural adviser and competition specifications may be secured by application to him.

### FILMS ON STORE MODERNIZATION

In line with the F. H. A. campaign the Pittsburgh Plate Glass Company and Westinghouse have prepared four slide sound films treating store fronts and lighting. Each film is a complete story in itself and lasts ten minutes. These films are available through the warehouses or branch offices of the Pittsburgh Plate Glass Company and Westinghouse. Operators and complete equipment will be furnished free of charge to clubs, business organizations or other groups interested in the subject of modernization.



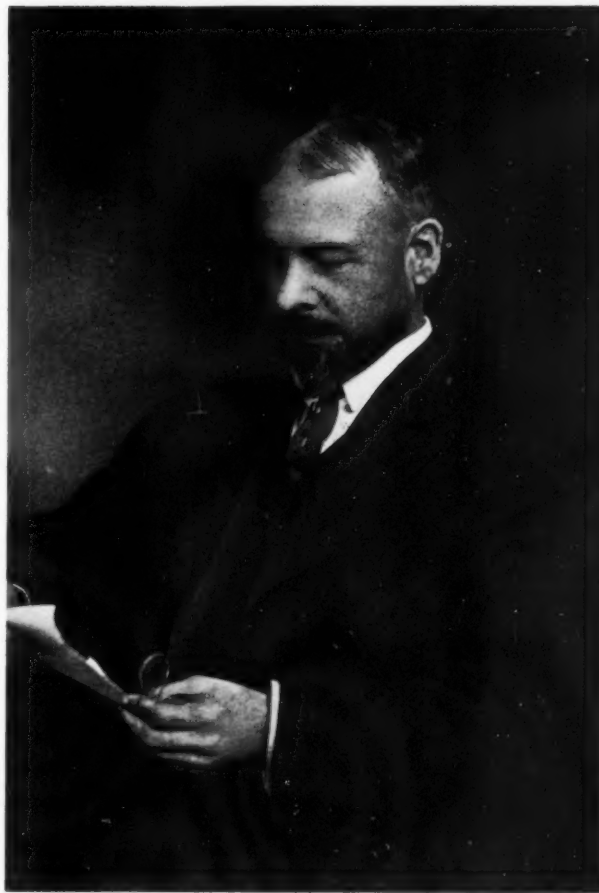
## ARCHITECT'S LIBRARY

**KINDERGARTEN CHATS: On Architecture, Education and Democracy.** By Louis H. Sullivan. Edited and Introduced by Claude F. Bragdon. Published by the Scarab Fraternity Press, 306 Marvin Hall, Lawrence, Kansas. \$2.50

Not more than once in a lifetime, it seems to me, may a man expect to be called upon to review a book of such deep and vital significance as this one. As a human document of the utmost sincerity it may not be challenged. Furthermore, the book is dedicated to *truth in architecture*. A claim to some degree of veracity is therefore implied. To those of us who still cling to the old-fashioned belief in absolute values and who have answered, at least to our own satisfaction, the ancient question of Pilate, the mere idea of such a book suggests an oasis in Sahara. I can promise a thrilling experience to any one who will read this book in that kind of receptive spirit. The skeptical reader will probably not be converted, but he will enjoy the logical unfolding of Sullivan's philosophy, and the bountiful exuberance of its quality of utterance. It is a rare book, and you are quite likely to be enthralled by it.

Looking back to the days when each week brought an installment of these essays, I remember, as of yesterday, the excitement they caused among the draftsmen in the Pittsburgh office where I was employed. As a former pupil of Sullivan, I was called upon to read a paper on the great man and his work to the club where the draftsmen and younger architects foregathered. But mostly there were jeers for the "Chicago Renaissance." The late John W. Norton, also a lover of truth, said once that it was very dangerous to "disturb the habits of thought" of other people. They would resent it, and become unfriendly. That is what Sullivan's work had done, and that is what his essays did when they were first published. The architectural profession did not pay much attention to Sullivan's message. It resented his uncompromising strictures and harsh criticisms, and kept right on doing everything that he condemned. Nor was his keen analysis of the educational fallacies of the day taken to heart. True, there was a bit of lip-service rendered here and there, but, in the main, things went on in the same old way. There was an ever-increasing acceleration in the tempo. "Prosperity" was in the air, and bigger and higher buildings, and ever more and more buildings, were the watch-words. In New York the alarmed city-planners compelled the adoption of "set-backs" as a partial defense of the few patches of sky that were left. So set-backs became the mode all over the country. The resulting buildings looked so well that something happened to the architects; which was partly due to Sullivan's theories, and partly to a realization of a painful inadequacy in the academic approach. Without definitely giving Sullivan any credit for it, "functional" architecture finally began to be popular.

Sullivan was profoundly discouraged by the reception given to "Kindergarten Chats." He loved a good fight, and he received only a shrug of the shoulder. Even the editors of the *Interstate Architect and Builder*, of Cleveland, Ohio, which published the series, damned with faint praise the whole performance in the issue which



Photograph by Koehne

LOUIS H. SULLIVAN

carried the closing chapter. They made excuses for Mr. Sullivan, because after all, said they, "For his originality, vigor and boldness in writing who can help liking him? He exhibits a brand of manhood that Americans especially admire." As for his message, it was all a matter of "taste," as was the current "architecture" of the period—a dark period indeed for American Art. In its self-conscious "highly educated" state of mind the times were reactionary, and more hopeless than had been the dark night of twenty-five years further back when Richardson's torch began to shine into the crannies of the architectural caverns. That being so, it is but fair to give those editors credit for real courage in being willing to publish the essays at all.

During the entire year in which *Kindergarten Chats* appeared each week, I can find only one letter "to the Editor" published. It was answered the following week by Mr. Sullivan. The writer of the letter signed himself "A. L. F." Sullivan's attitude toward criticism was fully revealed in that brief exchange. He wrote, "When my thesis shall be completed then you may turn on all the artillery of criticism that you please. A philosophy that will not withstand rough usage is no philosophy, and by this standard, which I hereby accept in advance, my philosophy must either survive and triumph, as I think it should, and in which case there will come, by a natural process, a complete and world-wide regeneration of the architectural art, or—it must go by the board. I ask no favor and give none. I ask no quarter and I give none. The time has come when a vital issue must be fought to a finish. Whether a false education is to dominate us, or whether we are to evolve from ourselves and from the conditions of democracy a true education is that

issue." Sullivan expected a fight, and would have welcomed it. Instead he was overwhelmed by a devastating silence.

If that experience is to be repeated now it would have been wiser if Messrs. Elmslie, Bragdon, and the architectural fraternity of the Scarab had left the old files in the scrap books. But there are many indications that the Kindergarten Chats were written thirty years or so ahead of their proper time. Much of Sullivan's philosophy has found its way into current thought and design. Witness Saarinen's study for the celebrated Chicago Tribune Competition. Witness building after building whose frankly articulated structure is winsomely and logically expressed. At least one Convention of the historically conservative American Institute of Architects has devoted an afternoon to the discussion of "Precedent in Architectural Design." Ten years ago Sullivan's "Autobiography of an Idea" was published by the Press of the same conservative organization. It became a "best-seller" and is still in demand. As Mr. Bragdon says in his Introduction, Sullivan was "the first 'functionalist'—the first to insist, by precept and example, that the form of a building should follow and express its function. By reason of this fact he is the spiritual father of everything sound and good which is being done, under whatever banner, in American architecture today." Sullivan's influence, even in his life-time, extended farther than he knew. Certainly he was aware that a medal came to him from France in recognition of his distinguished performance as expressed in his Transportation Building at Chicago's first World's Fair. But he held himself more and more aloof from social intercourse, and could not know the ferment that was going on in the minds of many of the young men. For example, one of the lads who in Pittsburgh had poked fun at the "Chicago Renaissance," later studied in Paris, and wrote me that "these Frenchmen only know one American architect and he is Louis Sullivan."

Now that New York is tired of it, the old game of copying ancient buildings, in whole or in part, is pretty definitely played out. Following New York, all the other cities now have examples of "Modernistic Architecture" which they proudly show. Even the revered Treasury of the U. S. A. now occasionally permits an Ishmaelite of an "outside architect" to design a building that is un-classic! France is tired of the old methods, and one wonders what she will use now to give the American students to bring home. Germany has been "stepping out" on her own ever since she became acquainted with Frank Lloyd Wright. The countries of lesser magnitude are doing very interesting things. They are more sure of themselves than are we in America where it all started. It is we who are more or less at a loose end, feeling our way. We have found out that it is one thing to break with the past, or even to assume a pose of so doing. It is decidedly something else again to build up a complete system of philosophy to take the place of the old methods and habits of thought. It does not appear that the schools have had much to do with the change. It does not appear that they are doing much about it. Many a puzzled professor is tolerating an "enfant terrible" in his classes. The ugly ducklings are showing off. Whether or not they will become swans remains to be seen.

At all events Architectural Education is being challenged, and seems to be at a loss as to how to meet the new issues. At least one answer, and I believe the answer may be found in this little book. It may be, and I believe that it is, the book of the hour. For the sake of the future of American Architecture, I pray you gentlemen, let it be read with an open mind.

Reviewed by WILLIAM L. STEELE.

THE HOSPITAL YEARBOOK. 13th Edition, 1934. *The Modern Hospital Publishing Co., Inc.*, 919 North Michigan Avenue, Chicago, Ill. 543 pages. Illustrated. \$2.50

This annual is a reference book on planning and construction, equipment, administration and purchasing, including valuable information on organization, operation and maintenance. It contains completely revised figures and studies of the hospital field and many architectural check lists compiled by competent authorities. There is also an exhaustive list of products and sources of supply.

ARCHITECT'S SPECIFICATIONS — HOW TO WRITE THEM. By Goldwin Goldsmith, Ph.B. *John Wiley & Sons, Inc.*, 440 Fourth Avenue, New York City. 131 pages. \$2.50

The author outlines and explains a general but definite system for specification writing for the student and beginner, which may be easily modified by the more experienced specification writer. The methods suggested have been tested over a period of years and found workable. Five divisions of the system follow: (1) a system for display of drawings for reference; (2) a system for making notes preliminary to writing; (3) a system for organization by trade sections; (4) a system for arrangement of subheads and subject matter; (5) a system for indexing sections, numbering pages, etc.

BEGINNING PROBLEMS IN MECHANICAL DRAWING. By Charles A. Bennett. *The Manual Arts Press*, Peoria, Illinois. 92 pages. Diagrammatical illustrations. 48c.

An elementary text emphasizing study of each problem before beginning work; at the same time it stresses the need for a higher standard of technique.

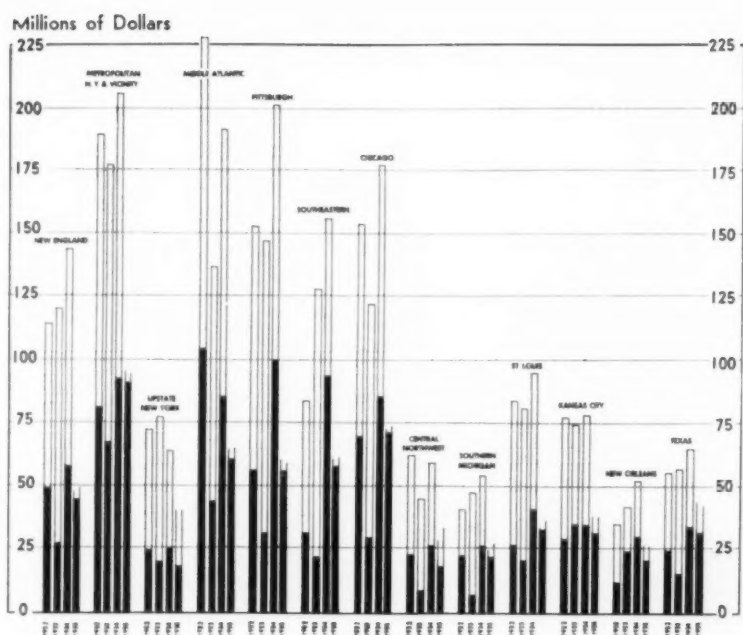
DER KONSTRUKTIVE HOLZHAUSBAU. By Dr. Ing. Franz Klimscha. *Verlag Franz Deuticke*, Leipzig and Wien. 57 pages. Illustrated. M 3.20.

A. S. H. V. E. GUIDE, 1935. *American Society of Heating and Ventilating Engineers*, 51 Madison Avenue, New York City. 1024 pages. \$5

The 13th edition of this reference book and text has just been released, and copies are now available. Though the Guide publication committee has produced a new book, it has retained from the older ones those data which are basic and fundamental in heating and air conditioning and it has made additions and changes to cover new developments in both theory and practice. More than 200 engineering specialists have helped in the preparation of The Guide 1935.

JONES' ESTIMATING TABLES on Air Requirement and Duct Sizes for Heating and Air Conditioning. *Domestic Engineering Company*, 1900 Prairie Avenue, Chicago, Ill. 68 pages. Illustrated.

SIX WAYS TO FIGURE RADIATION. Edited by Harold L. Alt. *Domestic Engineering Company*, 1900 Prairie Avenue, Chicago, Ill. 64 pages. Illustrated.



**CONSTRUCTION AWARDS BY MAJOR DISTRICTS**  
 Bars indicate annual totals for the years 1932-34, inclusive; portions in black show cumulative totals through May of each year.

## BUILDING TRENDS & OUTLOOK

### RESIDENTIAL BUILDING FORGES AHEAD

By L. SETH SCHNITMAN, Chief Statistician, F. W. Dodge Corporation

**R**esidential building awards continue to show encouraging improvement over the totals for 1934; the volume reported in the 37 eastern States during the initial half of June, amounting to \$25,779,200, almost equaled the total reported for the full month of June 1934. Coming on top of a substantial improvement in May the current gain assumes even greater importance. The May residential contract total, it should be recalled, was about 6 per cent greater than in April and about 80 per cent ahead of the residential volume recorded for May 1934.

Because of continued expansion in activity in private as distinguished from public undertakings, the May contract total covering all classes of construction was the largest thus far recorded for any month of 1935. Total construction awards in the 37 eastern States during May amounted to \$126,718,600 as compared with \$124,020,000 for April and \$134,363,700 for May 1934. Of the May 1935 total, residential building amounted to \$44,901,500 or about 35 per cent. In April the residential total was \$42,202,800, while in May of last year residential awards were only \$24,840,200, or less than 20 per cent of all construction.

Nonresidential building contracts awarded during May amounted to \$50,431,300 as against \$41,328,100 for April and \$52,722,200 for May of last year. Civil engineering projects undertaken during May, i.e., public works and utilities, totaled \$31,385,800 as contrasted with \$40,489,100 for April and \$56,801,300 for May 1934.

For the initial half of June nonresidential building contracts totaled \$22,292,200 as against \$21,541,000 for the

corresponding period of 1934; engineering projects undertaken during the first half of June totaled \$18,466,800 as against \$28,705,300 for the like period of last year.

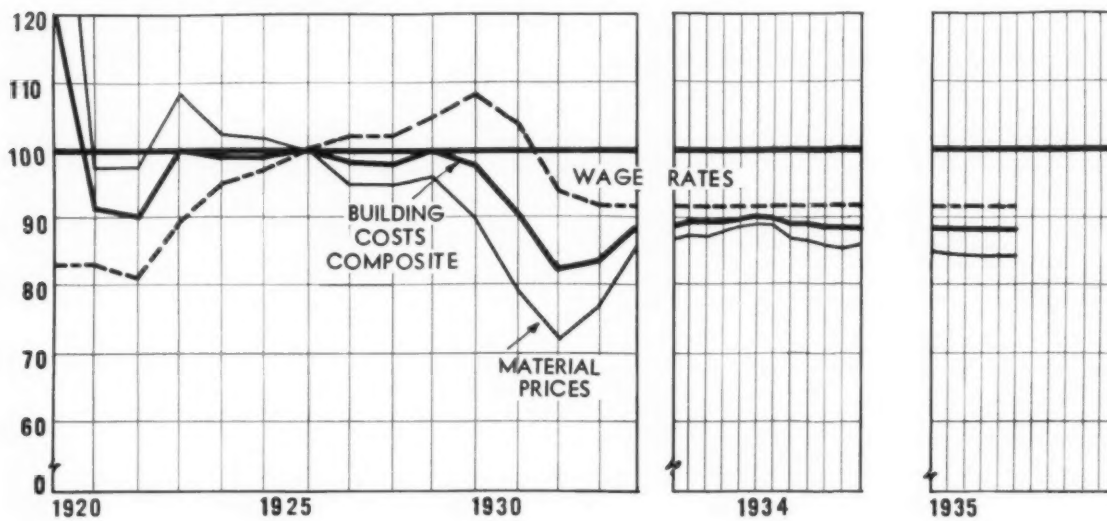
Altogether the figures for contracts covering all types of construction for the first half of June indicate that the June total as a whole may likely exceed not only the volume reported for May but even the total shown for June 1934.

For the elapsed portion of 1935 through June 15, total construction contracts amounted to \$615,038,300 as against \$790,574,900 for the corresponding portion of 1934. Of the major branches of the industry only residential building was able to show a cumulative contract volume in excess of that recorded for 1934. For this class, contracts since the beginning of 1935 amounted to \$184,119,900, a gain of almost 60 per cent over the total of only \$118,464,800 for the period from January 1 through June 15, 1934. For nonresidential building, cumulative awards since the beginning of 1935 totaled \$222,099,400 as against \$256,837,400 for the corresponding period of 1934.

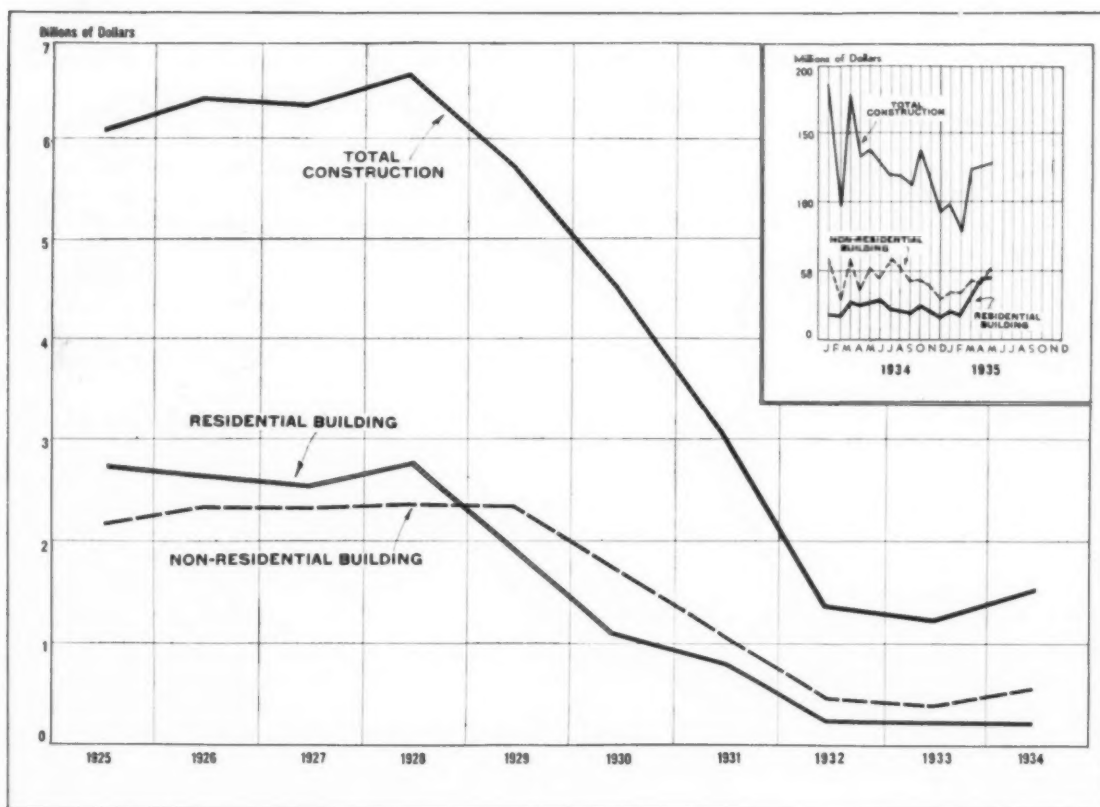
The chart above traces the cumulative development of the construction industry at large, by districts, in the area east of the Rockies for the current year through May with comparisons for the years, 1932-1934, inclusive. On the following page a chart is given which traces residential and nonresidential building contracts beginning with 1925. In view of the current improvement in residential building this chart should prove of timely interest to most readers.



## MATERIAL PRICES, BUILDING WAGE RATES, AND BUILDING COSTS . . . 1926 monthly average = 100



## CONTRACTS FOR CONSTRUCTION (1925-35) . . . 37 Eastern States

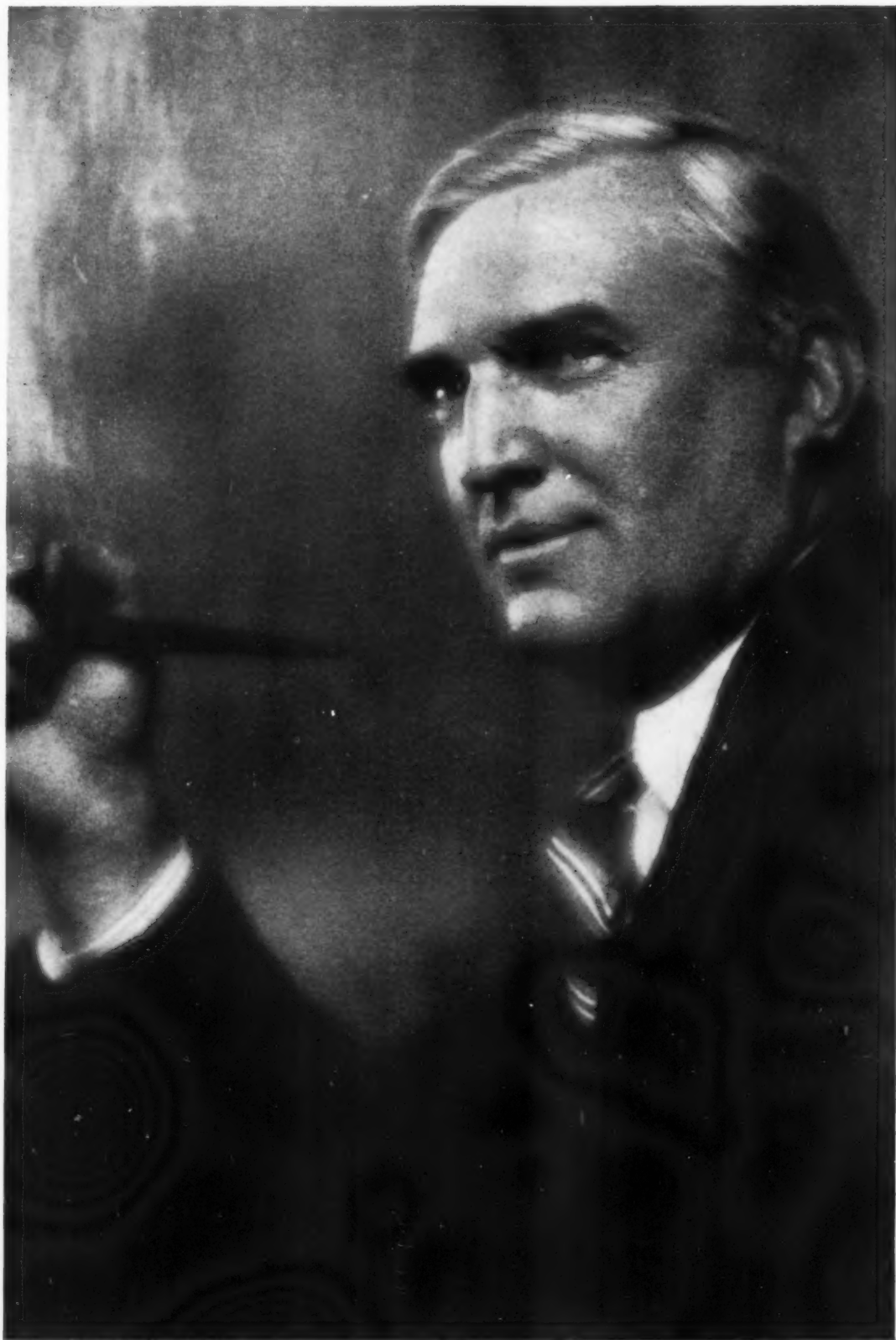


The curves on this chart picture the trend of construction by years since the beginning of 1925, with special emphasis on residential and nonresidential building. Civil engineering projects, though not separately charted, are included in total construction. Residential building improvement since February 1935 (see upper insert for monthly changes) has tended to put this class of work in a position of primary importance.



#### **NEXT MONTH:**

During the depression years many new processes, products and methods have been developed in industry which give a wide range of new potentialities in building design and construction. It is significant that the National Industrial Conference Board devoted its annual meeting in New York in June to a review of these industrial developments, and stressed the importance of preparing for future progress. For the August issue has been assembled an array of information relating to new products and new practices which it is believed that architects will find basically valuable in developing house designs. The construction materials and mechanical products available to designers will be reviewed, together with information on approved ways of using these materials.



*Photograph by Pirie MacDonald*

STEPHEN F. VOORHEES, NEW PRESIDENT OF AMERICAN INSTITUTE OF ARCHITECTS

VOL. 78 NUMBER 1

1 9 7 3 5  
J U L Y

# **T H E ARCHITECTURAL RECORD**

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## **ELECTIONS OF THE AMERICAN INSTITUTE OF ARCHITECTS**

At the Sixty-seventh Convention of the American Institute of Architects, held May 28-30 in Milwaukee, Stephen F. Voorhees, chairman of the Construction Code Authority, was elected the new president. He is a member of the firm of Voorhees, Gmelin and Walker, of New York, which has designed many notable buildings. He succeeds Ernest J. Russell of St. Louis.

Other officers for 1935-6 are: first vice president, Louis LaBeaume, St. Louis; second vice president, Francis P. Sullivan, Washington, D. C.; treasurer, Edwin Bergstrom, Los Angeles; secretary, Charles T. Ingham, Pittsburgh. The following have been chosen regional directors to serve three years: Great Lakes Division, Walter R. McCornack, Cleveland; Western Mountain Division, William H. Crowell, Portland, Ore.; Middle Atlantic Division, William G. Nolting, Baltimore, Md.

Carl Milles, sculptor and professor of sculpture at Cranbrook Academy of Art, Cranbrook, Mich., and Harold R. Shurtleff of Boston have been elected to honorary membership in the Institute. Mr. Milles relinquished his post as professor of sculpture in the Royal Swedish Academy of Art three years ago to join the Cranbrook colony; he has designed the Indian figure representing peace which is to be executed in Mexican onyx and which will stand thirty-five feet tall in the new city hall at St. Paul. Mr. Shurtleff was designated as an architect to determine the historical background for the restoration of Williamsburg, Va., by John D. Rockefeller, Jr.; he also has assisted Samuel Eliot Morison, professor of history at Harvard, in the writing of a history of that University.

The following fellows of the Institute have been elected: Robert Seeley De Golyer and William Jones Smith, Chicago; Alfred Fellheimer, Frederick Augustus Gold, Philip L. Goodwin and Henry Stuart Waterbury, New York; Walter R. McCornack, Cleveland; Floyd A. Naramore and Harlan Thomas, Seattle; Rudolph Weaver, Gainesville, Fla.

# APPRAISING THE A. I. A. CONVENTION

By WILLIAM STANLEY PARKER, F.A.I.A.

**W**hat really happened of significance? Is the profession, as expressed in the actions of its national organization, stepping forward with the times, standing still, or, through failure to grasp the significance of present-day tendencies and problems, actually slipping backward under the current of progress?

This Institute Convention, like many in the past, will, to any given eye, probably yield evidence supporting both conservative and progressive tendencies, but different eyes may well differ on the character of the evidence. Judgment is affected by interest, and architects are not all interested in the same things. That, as I presumed to demonstrate a dozen years ago in the pages of the *Institute Journal*, is why so many architects complain annually about the Convention procedure, each architect finding so much time spent on subjects that do not interest him.

My imaginary conversations around the Secretary's Table were, however, well documented by letters from those who took part in the discussions and these letters clearly established the fact that while the profession, and therefore the Institute, is vitally interested in a wide variety of subjects, each individual architect actually is deeply interested in only a few of the basic elements of the complicated service which he is called upon to render. If, therefore, as generally happens, the Convention deals to some extent with most of the important problems of the profession, each delegate finds himself most of the time listening to discussions on phases of the profession which do not greatly interest him, and quite naturally concludes that the Convention has been badly handled by presenting dull speakers on subjects of no particular importance. Unfortunately, however, for those who administer our Conventions, there is no agreement as to which subjects are unimportant and uninteresting.

With this in mind I approach the problem of the recent Convention with a desire to analyze it from the imaginary point of view of a "composite" architect, one who, like a group of diversified partners, holds a broad and inclusive interest in the varied manifestations of the profession. Having thus scanned the results of the Convention, it may be profitable to look ahead and formulate what should be, what perhaps is, the program of the Institute for the coming year.

**T**he Convention undoubtedly fell under the somewhat ominous spell of By-Law Amendments, as has happened with other Conventions within my memory. In fact this item on the program afforded, to one with a good memory, an example of poetic justice as amusing as it evidently was unconscious to the chief participant.

Many years ago a painstaking committee brought before a Convention a thoroughly prepared and also a quite complete revision of the By-Laws, in accordance with general instructions of the previous Convention. It was the result of a long year's work, in-

volving countless hours of study and effort. The delegates in Convention assembled picked it to pieces and the chairman of the committee saw his year's work come to precisely nought, the whole matter being turned over to a new committee for a fresh start.

In Milwaukee the Convention was presented with as carefully and laboriously prepared a document on By-Law Amendments as has ever been presented to any Convention, in accordance with precise instructions of the last Convention. But when the results of these instructions were studied, the Institute indulged in what Vice President Maginnis, from the chair, characterized as a form of self criticism, changed its aggregate mind, and again picked the suggested changes to pieces. After approving the amalgamation of the Constitution and By-Laws into a single set of By-Laws, it slightly amended the existing provisions relating to State Societies and to Junior Members, and handed the remains back to the Board for the complete redrafting made necessary by the rejection of the major membership amendments which had been proposed. All unconscious of the historic parallel in which he was involved, the accepted floor leader of the assault on the proposed amendments was the chairman of the committee who years ago had seen his own handiwork similarly treated.

All this gave to the writer a certain entertainment which normally is absent from the process of amending By-Laws. It's dull work at best, albeit necessary from time to time. A reasonable number of fleas is good for a dog, keeps him from broodin' on bein' a dog. Even so with by-law amendments and a Convention; but enough is enough and the recent Convention suffered from a surfeit.

The program, realizing the importance of these amendments left several sessions open for these and other items, at the expense perhaps of time that might have been spent listening to stimulating papers on present-day tendencies in design or other phases of architectural practice. These certainly would have avoided the irksome roll-calls with which several sessions were afflicted, to an extent not equaled within the memory of the oldest delegate.

**O**ne thing, however, must be said for the by-law amendments this year—they did not concern themselves solely with the internal mechanism of the Institute. They involved the entire structure of the profession. They represented an effort to accomplish the mandate of the last Convention and provided a means by which any "State Societies, other unaffiliated architectural organizations and individuals" might affiliate with the Institute in order to effect "the unification of the entire architectural profession in a single strong national organization." Here was a task worthy of the undivided attention of any convention of architects. A lecture on aesthetics, however compelling, would have to yield in





KOHLER VILLAGE IN WISCONSIN — "THE MOST DELIGHTFUL EXPERIENCE OF THE CONVENTION"

importance to an effort involving the future solidarity and effectiveness of the profession.

And in the light of present-day conditions is any other effort of more importance to the profession? Unless a clear affirmative answer to this question is forthcoming, it is a little hard to justify criticism of the Convention on this score. And after all there were other events of interest. The first afternoon session dealing with the relation of the architect to government agencies was certainly of vital interest to the members of the Institute. The official representatives of the government agencies gave clear and forceful statements, and by no means unfriendly ones, and the concluding report by the chairman of the Committee on Public Works was admirable and gives promise of being a firm foundation on which to build a structure of fair workable relationships between the many Federal agencies and the profession in the coming years.

The evening session devoted to the report of the Committee on Education disappointed me only in its failure to develop some discussion that might have further illuminated the problems and procedures of the new mentor system, probably as difficult to develop as it is desirable. But each year, as I listen to the committee's report of progress, I am impressed with the fact that this important department of Institute activity has made amazing strides forward and is accomplishing far-reaching results for the benefit of American architecture and the related arts, not alone through improved processes

of education within the profession but in the development of a wider and more intelligent appreciation of the fine arts among the teachers and students of our American colleges. Here is a splendid work made possible by the Carnegie Foundation as well as by special Institute funds, for the initiation and management of which the Institute may well be proud as well as grateful for the many years of constructive service of a devoted group of members who have made a real contribution to the profession through their service on the Committee on Education.

I think for most of the delegates, the trip to Kohler Village remains in their memories as the most delightful experience of the Convention, the most successful excursion of its kind that I can remember. Between two indifferent cloudy and rainy days Wednesday came clear and sparkling. The management of the trip was equally perfect.

At the luncheon we were given a first taste of the quality of the village by the little costumed flower girls and the daughters of the village who, after ministering to us at table, regaled us with some charmingly rendered quartettes. These children and young people seemed to radiate the happiness and contentment that the village in every aspect suggests.

A trip through such a plant as that at Kohler is inevitably impressive. The orderliness and system, the



Photographs © The Milwaukee Journal



ARCHITECTS AT THE MILWAUKEE CONVENTION, FROM LEFT TO RIGHT: RUSSELL S. WALCOTT (CHICAGO), ARTHUR S. COVEY (NEW YORK), ELLIS F. LAWRENCE (OREGON), EMERY STANFORD HALL (CHICAGO).

multiplicity of departments, the varied and fascinating techniques so highly developed, culminating in the glazing process with its Brobdingnagian pincers that picked the glowing fixture out of the furnace, set it neatly on its turntable to be powdered with silica, then back into the furnace for a few moments only to be again re-treated, powdered, and again fired.

The village itself is perhaps no more than many another well designed small house development, and there are many in various parts of the country. This one is old enough to have given an impulse to many others. The houses are excellent of their kind and marked with a restraint too often lacking in commercial developments, but their superiority in design is not the chief significance of Kohler Village. This seems to me to lie in the general community atmosphere that has been created, the conjunction of a large well administered industry with the social amenities of a small country village, not just Topsy-grown, but planned so as to provide for the unmarried as well as the family groups and for the joint community activities as well as the quiet privacies of family life.

It is well urged that the success of the current housing projects being developed under PWA will depend upon the character of their management. Kohler Village seems adequate proof of this. Can one escape the conviction that underlying its atmosphere is something imparted by the spirit of its founder who continues to guide the policies of its administrations, something of democratic friendliness and social equality in spite of wide variations of income? Superabundant wealth that permits the scale of hospitality accorded us in Mr. Kohler's house seems able to march hand in hand with equality in voting, sports, and other community affairs.

**W**hat, then, in brief, happened at the Convention?

Our relations with government agencies were clarified and a well conceived program for the future was outlined. Its approval may be symbolized by the election of its author as the second Vice President.

The Institute's Education Committee marked another step forward in its admirable program.

We met once more with the Producers' Council which looks ahead to enlarged membership and activity, and saw a sample of what an enlightened producer can develop in the way of by-products.

We didn't listen to impassioned pleas for more recognition of functionalism in design but we saw and felt the human result of straight-forward functionalism in community design and intelligence in community management.

We took another step along the difficult road of unification; shorter than last year's Convention suggested but nevertheless a step in the same direction, and time will prove its wisdom or correct its mistake.

And we called upon the Construction League to recognize its position of leadership and pledged the Institute's support of efforts to effect a real coordination of the construction industry, the responsibility for which, following the Supreme Court decision, again rests with the Construction League. Before this is printed the League will have taken its first step at the meeting of the General Assembly called for June 17.

**W**hat should constitute the main features of the Institute's program for the coming year?

With the normal continuance of its regular activities, as expressed in its standing committees, there seem to me to be three major demands upon the Institute in its service of the profession during the coming months:

(1) Develop the utmost possible results of the Convention's action concerning State Societies, and devise the next step towards a desirable unification.

(2) Develop harmoniously with the government agencies the program outlined in the report of the Committee on Public Works.

(3) Marshal the utmost, in counsel and in active support, that the Institute can offer to the Construction League, which faces a most urgent task calling for enlightened and constructive leadership.

Here is challenge enough to the Institute.



*Photograph by Hedrich-Blessing Studio*

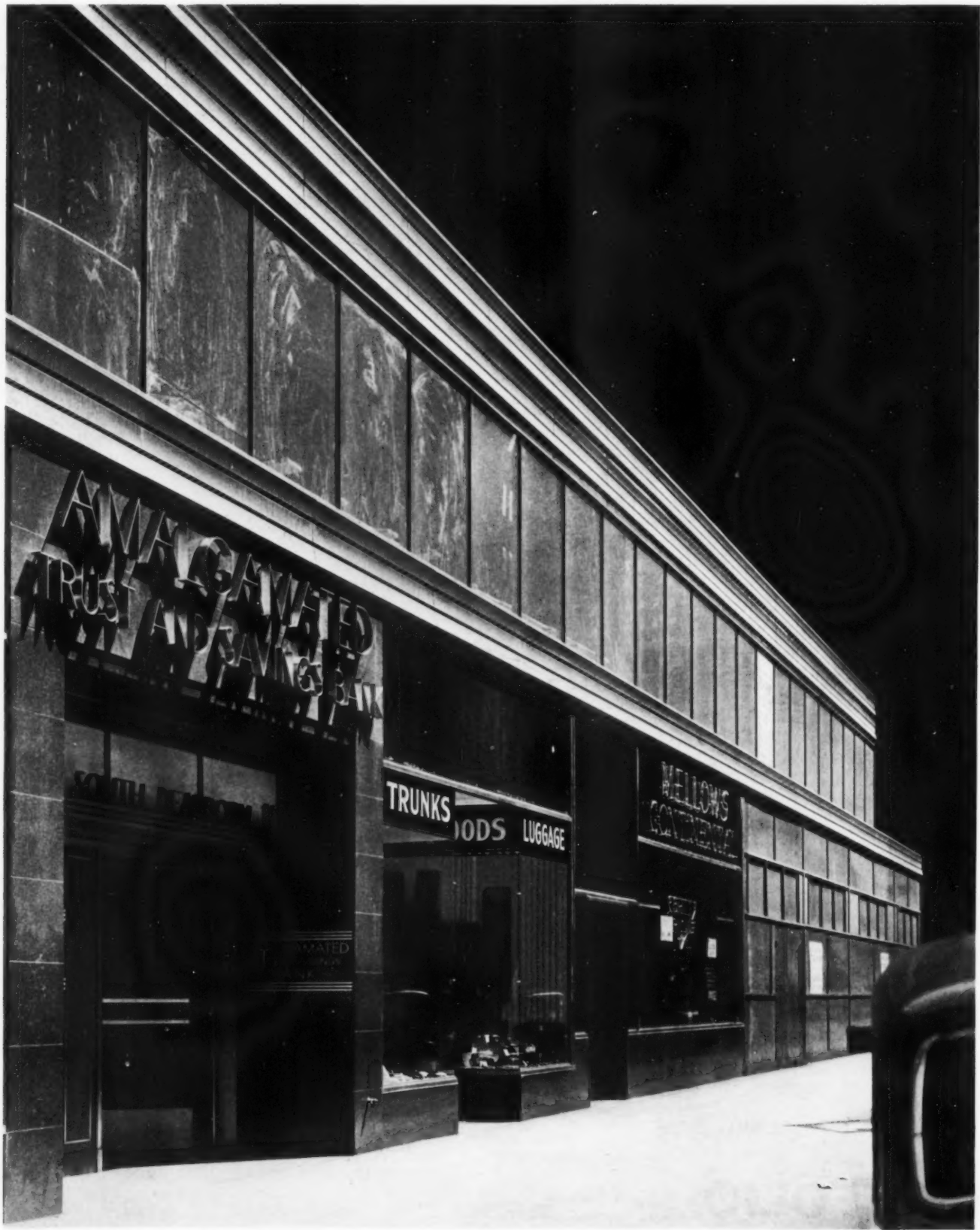
MAIN ENTRANCE TO FOYER LEADING TO BANK ON SECOND FLOOR

## PORTFOLIO

✓  
BANK AND SHOPS IN CHICAGO  
✓ HOLABIRD AND ROOT, ARCHITECTS



AMALGAMATED TRUST AND SAVINGS BANK BUILDING IN CHICAGO



*Photographs by Hedrich-Blessing Studio*





#### HOLABIRD AND ROOT, ARCHITECTS



This "taxpayer" replaces the old 7-story Guardian Bank Building and 11-story Adams Express Building on the southeast corner of Monroe and Dearborn Streets, located in the heart of Chicago's business Loop. The new building has two stories and basement for shops, offices, and the bank. It fronts 131½ feet on Monroe Street and 190 feet on Dearborn Street. The first story completely covers the property. The second story is set back from the street line approximately 5 feet and is 65 feet deep in both wings. The first story is 13½ feet in the clear, the second generally 12 feet with a portion 15 feet clear. The materials are glass and stainless steel. The building is air conditioned with individual control, the windows being completely sealed with heads on line with ceilings.

Left:

ENTRANCE TO BANK ON SECOND FLOOR

AMALGAMATED TRUST AND SAVINGS BANK BUILDING IN CHICAGO



*Photographs by Hedrich-Blessing Studio*



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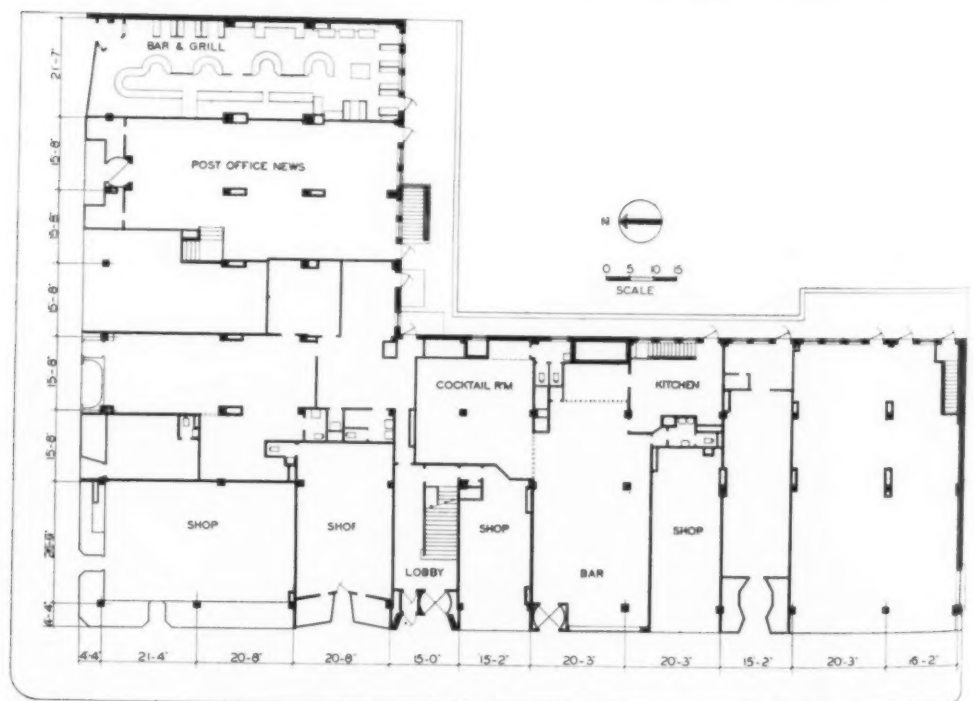
ENTRANCE TO BANK ON SECOND FLOOR





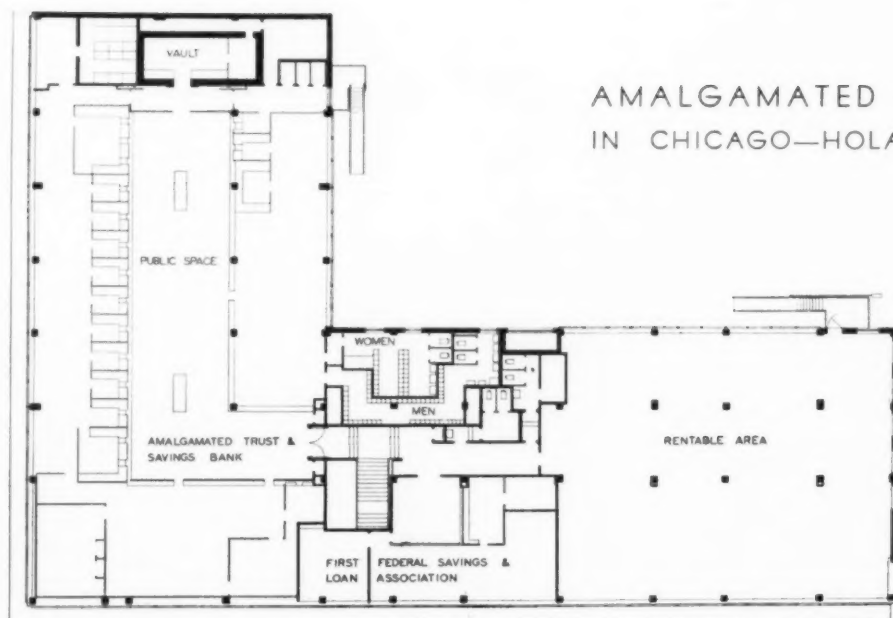
Photographs by Hedrich-Blessing Studio

# MAIN BANKING ROOM



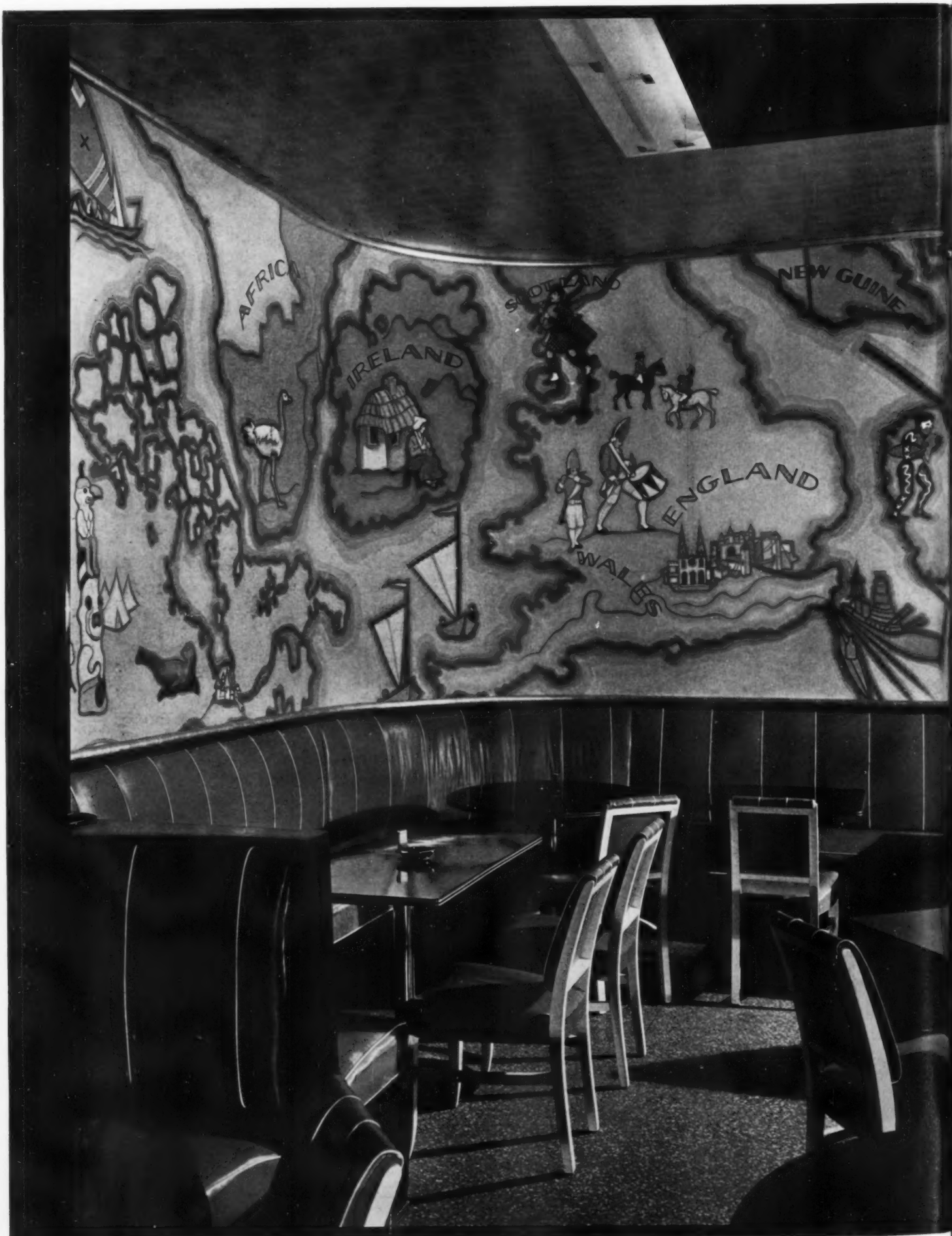


DETAIL OF BANK VAULT



SECOND FLOOR PLAN

AMALGAMATED TRUST & SAVINGS BANK  
IN CHICAGO—HOLABIRD AND ROOT, ARCHITECTS



Photographs © F. S. Lincoln



MAYFAIR RESTAURANT  
CAFE OF ALL NATIONS  
WASHINGTON, D. C.

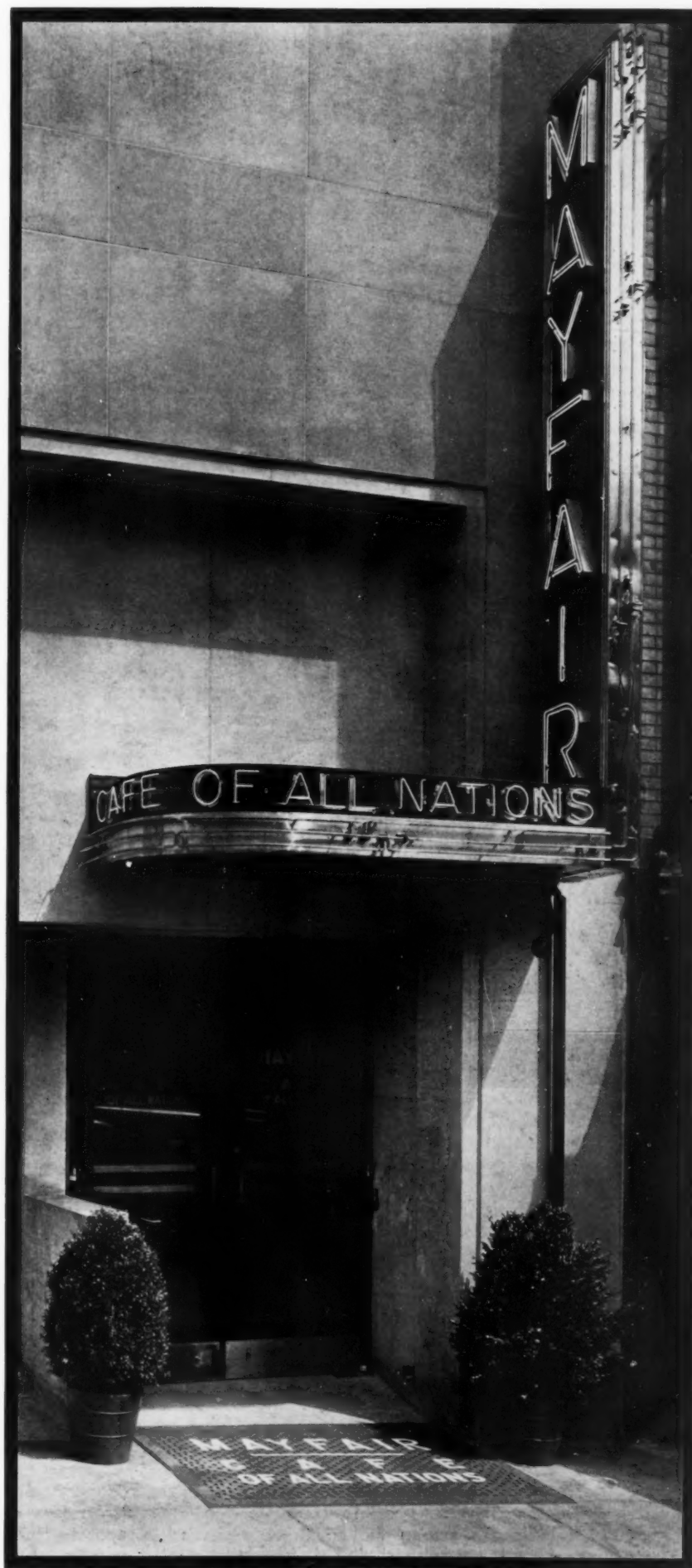
JOSEPH URBAN ASSOCIATES  
IRVING L. SCOTT & OTTO TEEGEN  
ARCHITECTS

This new café and restaurant occupies the complete basement of the Remington Rand Building and is entered by a vestibule. The check-room, washrooms, an elevator to the upper floors of the building, and the entrance to the main dining space, all lead from this area. (See plan on page 15.)

A novel method of displaying food and serving the patrons has been inaugurated in the Mayfair. The entrance side of the main room contains a display counter on which all foods available on the menu are shown in an attractive manner. The patrons view the food, then take a table where a waiter takes their order. The waiter then goes to the rear of the counter, which contains steam tables and hot plates and brings the food to the table.

The benches along three walls are upholstered in a deep blue-green fabricoid, as are the chairs. The woodwork of the chairs is white, while the tables have black formica tops and chromium-plated pedestals. All wainscoting and bench woodwork are painted in black lacquer. Along one of the long walls an arrangement of circular alcoves provides an intimate grouping for parties of six or eight persons. These alcoves are separated from each other by vertical sheets of black glass, reaching from the top of the benches to the ceiling.

In the main dining room, that part of the ceiling which is suspended is painted black. It is made of acoustic material in 12-inch blocks. The restaurant is air conditioned throughout, the fresh air outlet being contained in the suspended ceiling and the exhaust ducts under the bench seats. The entire source of light comes from the ceiling fixtures. Not only does each free-standing column in the main room terminate in a glass fixture comprising three sheets of projecting frosted glass, but a continuous fringe of two layers of frosted glass follows the perimeter of the suspended ceiling and provides good light for the outer edge of the room and the murals. The fixtures in the other rooms are flush with the ceiling.





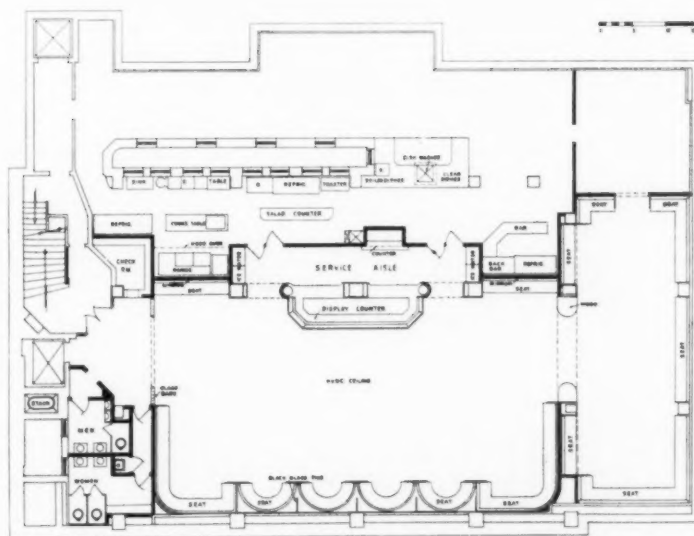
Photographs © F. S. Lincoln

## MAYFAIR RESTAURANT—CAFE OF ALL NATIONS WASHINGTON, D.C. . . . DESIGNED BY JOSEPH URBAN ASSOCIATES

The walls are resplendent with murals depicting the life of various nations—a subject most appropriate for Washington, the residence of ambassadors and important representatives of all foreign countries. Of those countries chosen, a sufficient contour of each serves as a background on which are superimposed scenes and customs pertaining to the various regions of that country. In the mural of France, for example, the outline of the country can be seen with portions of its near neighbors such as Belgium, Germany and Switzerland. The Arc de Triomphe rises out of the spot where Paris would appear on such a map; a palace and an 18th Century cavalier dancing a minuet are placed further south at Versailles. We see the vintage on the west coast near Bordeaux, shepherds with their sheep in the Basque region, the ramparts at Carcassonne, villas along the Riviera, agricultural pursuits in the formerly devastated region of the north, transatlantic steamers sailing from Le Havre, and fishermen along the west coast taking off for the Great Banks. Great Britain, Italy, Spain, South America and India are among the countries described in separate murals. Other nations are represented in a long mural, placed directly over the display counter, which shows natives dressed in the costume generally associated with the individual countries, each bearing the flag of his nation.



MURALS BY JOSEPH URBAN STUDIOS





TAYLOR STORE  
CLEVELAND  
WALKER AND WEEKS  
ARCHITECTS

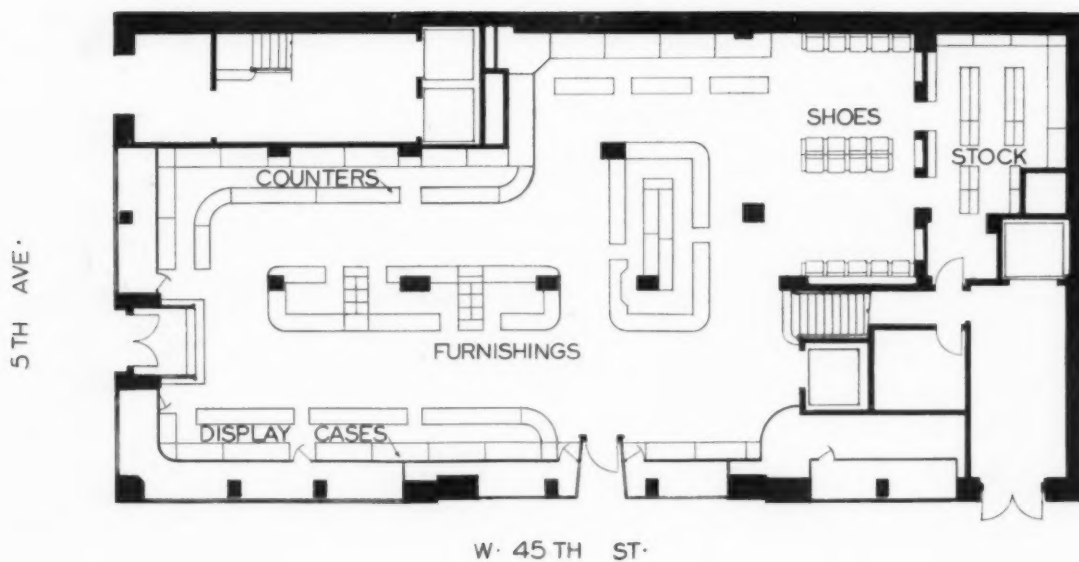




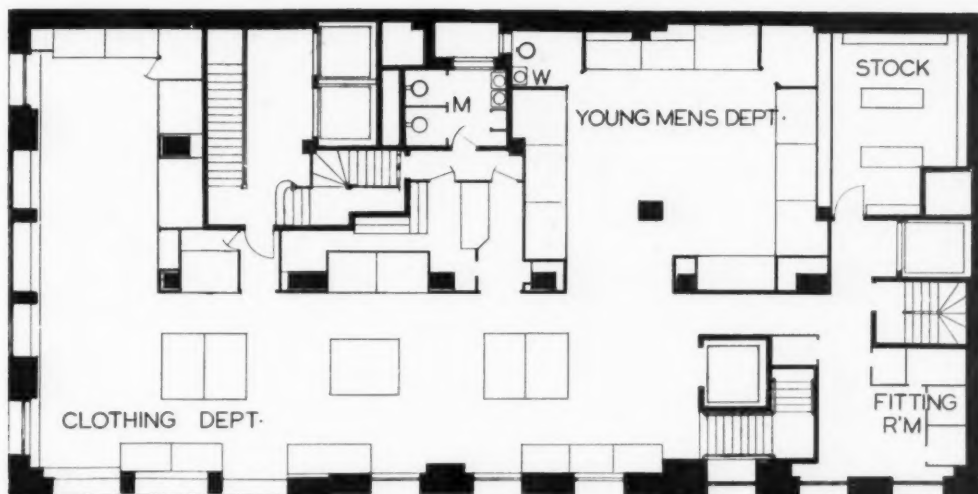




Photograph by Peyser and Patzig



SECOND FLOOR PLAN



WALLACH'S STORE . . . . . NEW YORK CITY  
DESIGNED BY STARRETT AND VAN VLECK, ARCHITECTS





WALLACH'S  
STORE IN  
NEW YORK

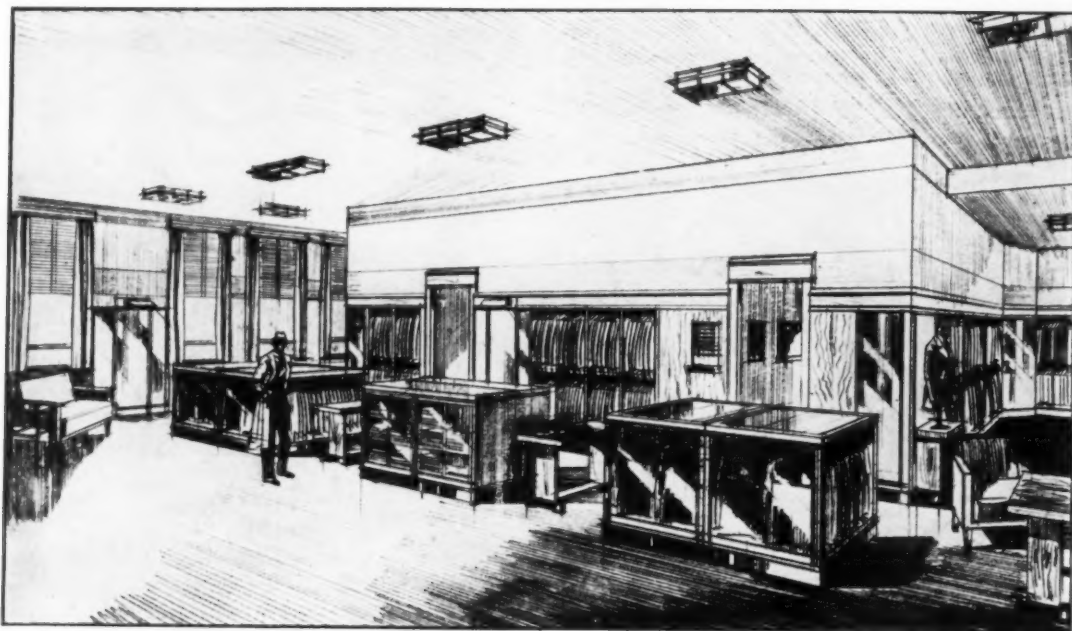


SHOE DEPARTMENT AT REAR OF STREET FLOOR



*Photographs by Worsinger*



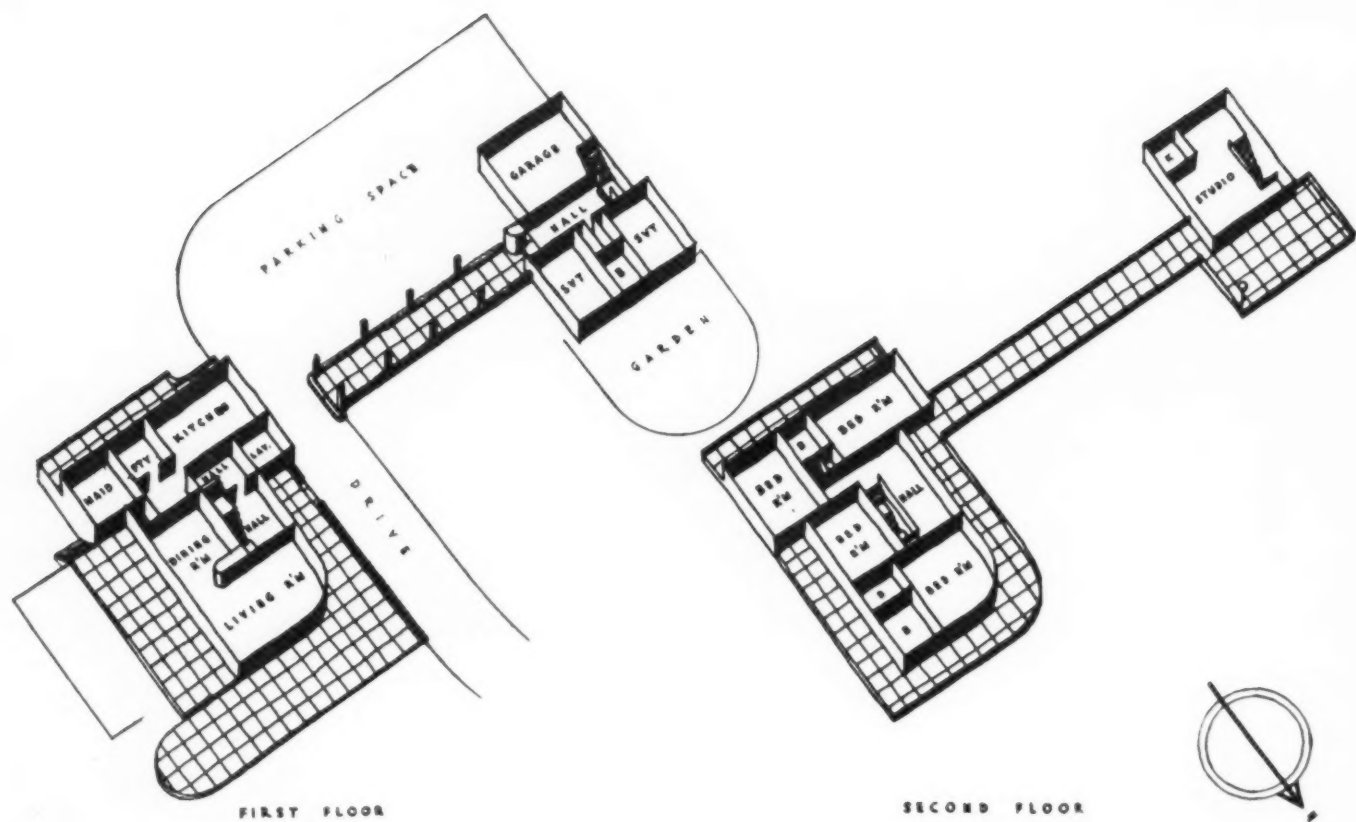


VIEW OF SECOND FLOOR LOOKING TOWARD 5TH AVENUE

MANDEVILLE  
& SFORZINA  
DESIGNERS  
OF INTERIORS

STARRETT &  
VAN VLECK  
ARCHITECTS

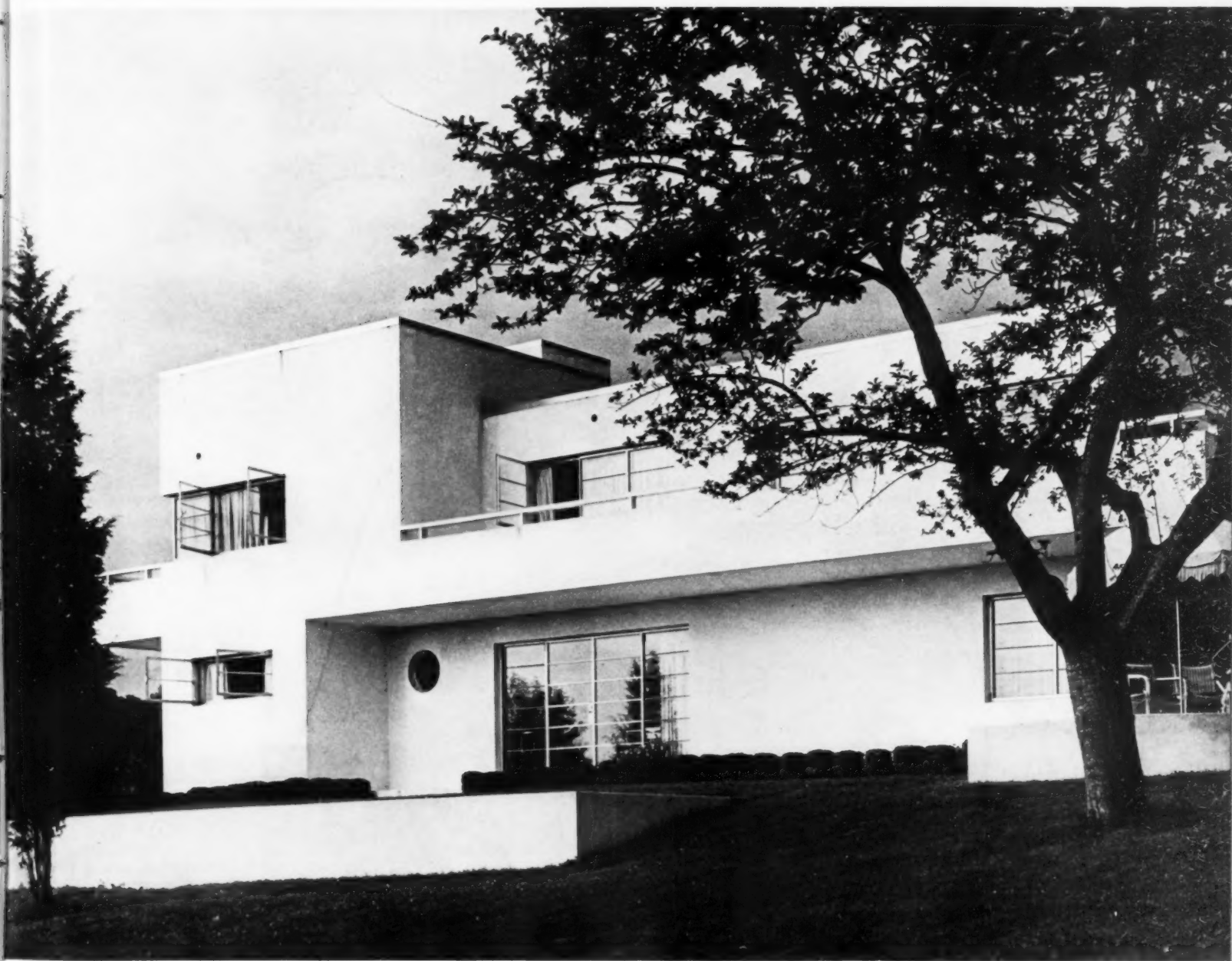




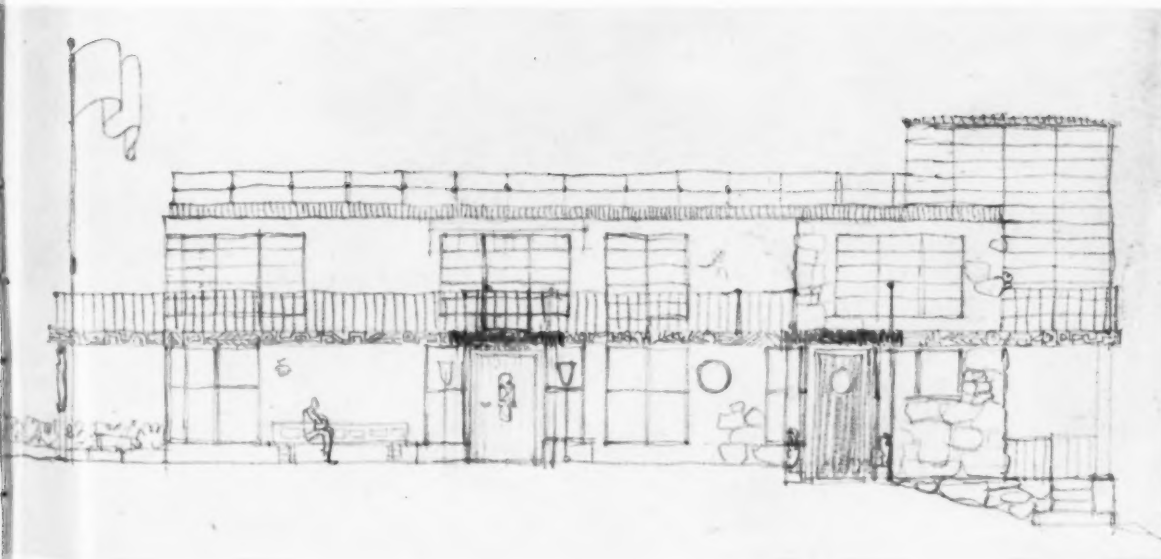
CONTEMPORA HOUSE      ROCKLAND COUNTY, NEW YORK  
 PAUL LESTER WIENER, DESIGNER



*Photograph by McLaughlin Aerial Surveys*



EAST FACADE, SHOW-  
ING DINING TERRACE



DESIGN SKETCH BY  
JOSEPH HOFFMANN OF  
VIENNA, WHICH WAS  
USED BY MR. WIENER  
AS INSPIRATION FOR  
A NEW DESIGN FOR  
NEW CONDITIONS.





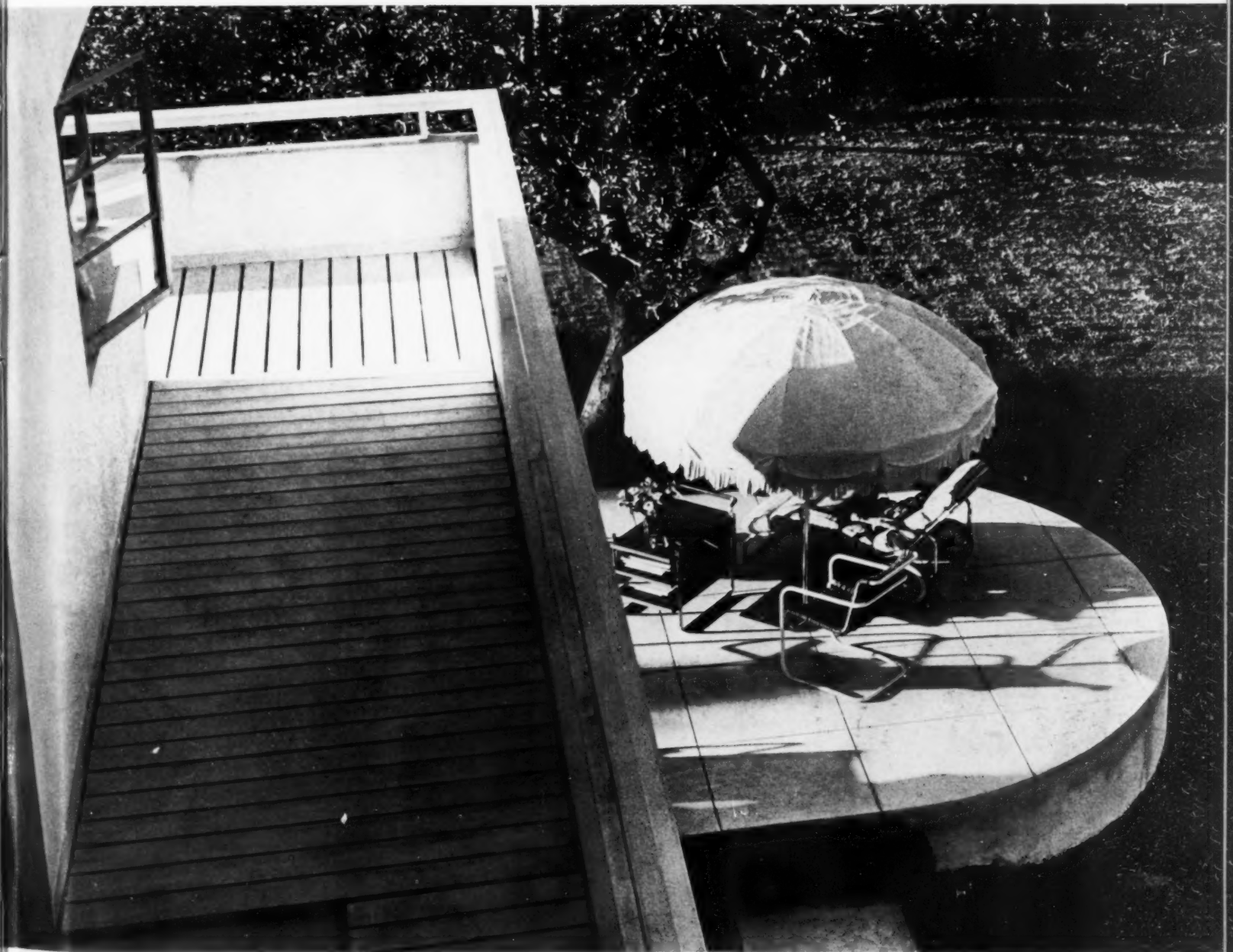
LIVING ROOM TERRACE

CONTEMPORA HOUSE . . . DESIGNED BY PAUL LESTER WIENER

The exterior is finely grained stucco, in an off white shade, applied over porous cinder blocks. The stucco is highlighted with thin bands of aluminum coping and with aluminum posts supporting the white wood terrace rails. One third of the wall space is broken by window or door casements of specially designed noncorrosive aluminum. The pitch of the almost flat roofs is inverted, and water drainpipes built into the walls in the center of the house. This feature removed the need for leaders on the façade.

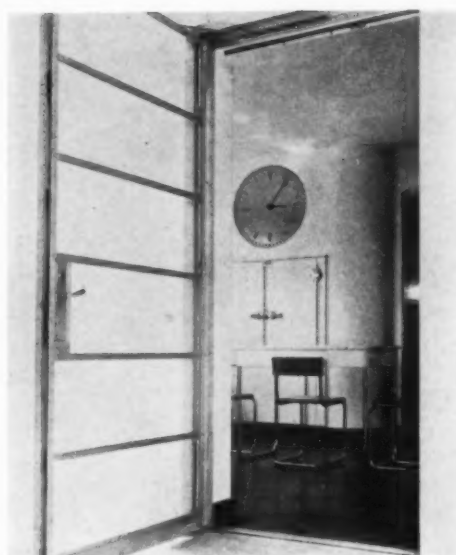
The main section of the house and what is known as the studio building are connected by a terraced passageway. The smaller section can be maintained independently, as it contains a bath, two bedrooms and kitchenette, in addition to the 24' by 32' studio; it has a thermostat control connected with the oil burner in the main house. The two buildings contain 14 rooms and 4 baths in all, each room opening on a terrace.

#### VIEW FROM UPPER TERRACE



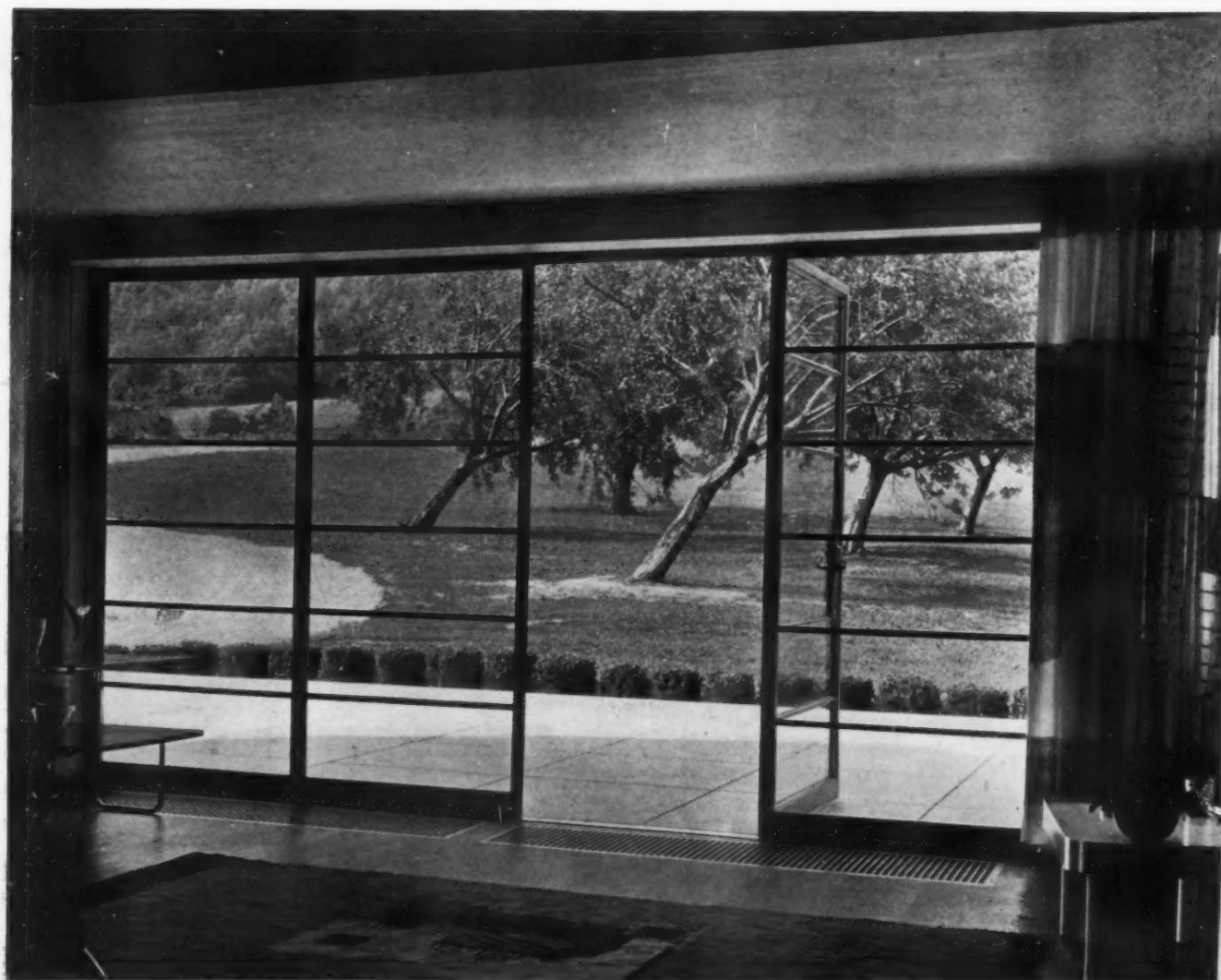


GARAGE DOORS AND STUDIO ENTRANCE



VIEW INTO KITCHEN

LIVING ROOM: Specially designed aluminum window and door casements, with light cove above.







DINING ROOM

CONTEMPORA HOUSE . . . DESIGNED BY PAUL LESTER WIENER

MASTER BEDROOM: High back of bed lacquered Chinese red; window curtains shaded from gray to blue.



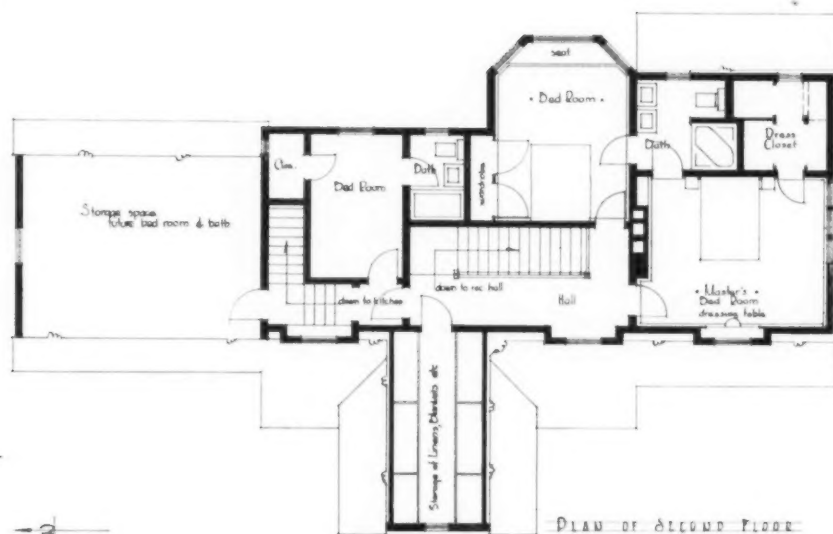
Contempora House is described as "an interlocking unit, with the built-in furniture, and also the mobile pieces, achieving a decorative value because of their functional purposes." The built-in items provide an important feature of the interior architecture of each room, their design being closely allied with the fabrics, closets, door knobs and radiator grilles. Colors for the fabrics, walls, floors and furniture were selected from the viewpoint of room exposure and layout and their relationship to indirect illumination at night. Each room was considered as a space composition in which the odd pieces of furniture could be moved freely without disturbing the essential harmony. Light enters the designer's composition, too, for no lighting fixtures obtrude themselves: the ceilings and walls are utilized to reflect light.

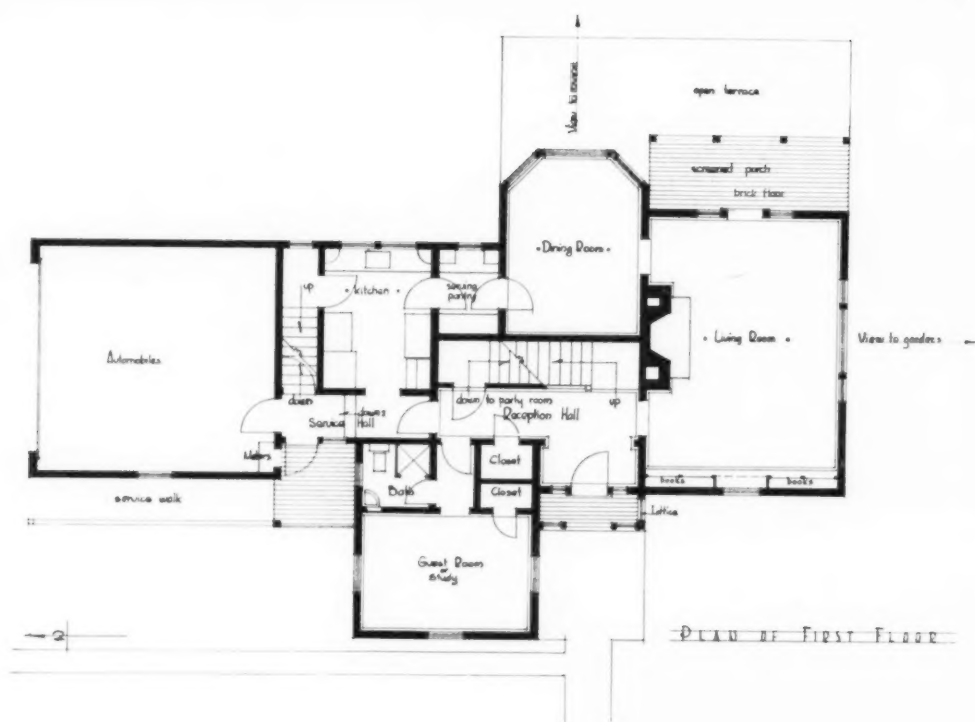
LIVING ROOM: Hand loomed window curtains in white, yellow and tones of gray.





HOUSE OF LAWRENCE J. PLYM  
AT NILES, MICHIGAN  
WILLIAM P. CRANE, ARCHITECT

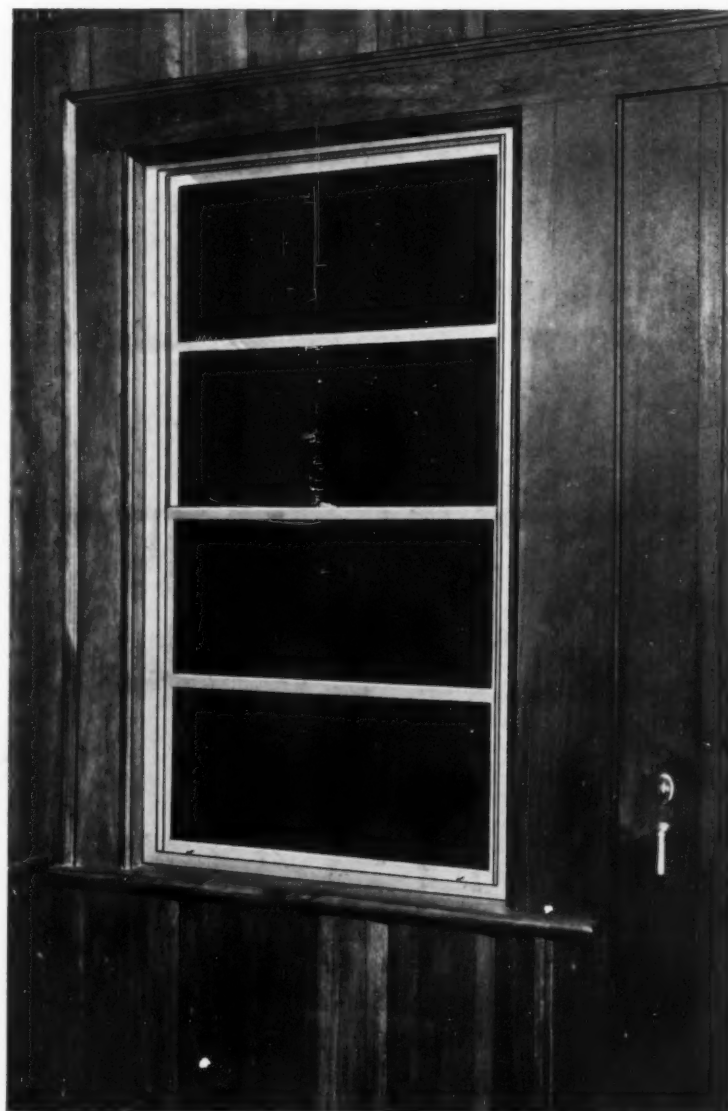




This house was designed to provide privacy of gardens and terraces to be developed to the rear. The desired relationship of the various functions of the house dictated the dining room's seclusion from the front door, and a serving pantry gave the best solution of separating the dining room from the noises of the kitchen. The guest room was brought out of the luxury class (as a room useful about one per cent of its days) and placed on the first floor (at once brought to 100% efficiency), giving privacy from the rest of the household to the occasional guest, and offering the same advantages to any member of the family.

The house is built of wood, with shingled side walls, relieved by boards and battens on the garage wing, and with a wood shingled roof. This construction, aside from its economy, was adopted because of the available services of a master carpenter. The foundations are concrete walls poured in forms built on the job, and the first floor is composed of light steel beams and concrete slabs.

Much study was given to the windows, as an entirely new weight hung aluminum window was used. This new window is fabricated of solid extruded aluminum sections which reduce the maintenance cost to a minimum and eliminate painting, sticking, swelling, shrinking or warping. The sash are designed so that the members are very small and compact and give ample strength and satisfactory weathering. The low infiltration of the windows and the use of rock wool installation in all walls and roofs produce considerable estimated saving in the annual heating bill. The windows are manufactured by the Kawneer Company, Niles, Michigan, and were used for the first time in this residence. After one year they are still operating satisfactorily.



ALTERATION AND ADDITION TO HOUSE  
OF E. S. BLAGDEN AT LLOYD HARBOR, LONG ISLAND

PHILIP L. GOODWIN, ARCHITECT



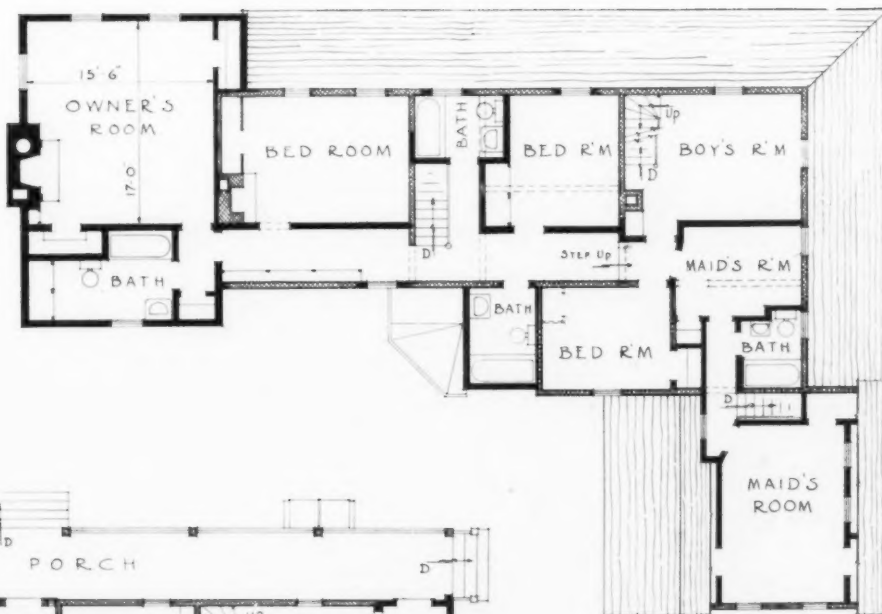
*Photograph by George H. Van Anda*





HOUSE BEFORE ALTERATIONS

SECOND FLOOR PLAN



FIRST FLOOR PLAN



— NEW 1934  
 — OLD  
 - - - REMOVED  
 0 5 10 SCALE IN FEET



*Photograph by Van Ande*

PHILIP L. GOODWIN, ARCHITECT

ALTERATION AND ADDITION TO HOUSE  
OF E. S. BLAGDEN AT LLOYD HARBOR, LONG ISLAND

# ANALYSIS OF REAL PROPERTY INVENTORY DATA FOR 65 CITIES & COMMUNITIES IN NEW JERSEY

By A. B. RANDALL  
Technical Adviser

The figures of the Real Property Inventory in New Jersey are based upon a wide variety of cities—from Newark, the largest, to some of the smallest suburban communities—thus giving a general gauge of what may be anticipated from the completed inventories which will cover all the principal "non-farm" portions of the State. Returns compiled to date cover 65 cities and communities, with a population of 2,067,442, or 51.3% of the total in the State. An analysis of the returns from these 65 cities and communities reveals several interesting points: (1) the substandard conditions of many of the structures and dwelling units in the State, and hence indications of the possibilities of a reconstruction program; and (2) evidences of a potential and perhaps not distant market for new housing and family accommodations.

In the first analysis which was made, using the Real Property Inventory figures for Trenton and the non-farm communities surrounding it within Mercer County as a sample, it was deduced that between 10 and 12 per cent of all family accommodations in the State were sufficiently substandard, either by deterioration or obsolescence, to warrant replacement. It is of interest to compare this estimate with facts deduced from the Inventory returns for the first 65 communities tabulated:

## A. RESIDENTIAL STRUCTURES NUMBER PER CENT

Total number	277,701	100
Number needing major repair (#3 class building)	69,311	25
Number unfit for habitation (#4 class building)	12,965	4.7
Total in bad condition (#3 and #4 class building)	82,276	29.7
Total fifty years old, or older	35,483	12.8

## B. DWELLING UNITS

(or family units)	NUMBER	PER CENT
Total number	550,056	100
Number needing major repairs	127,988	23.3
Number unfit for habitation	30,321	5.5
Total number in bad condition	151,378	27.6
Number using heating stoves	192,804	35.1
Number having no running water	4,509	0.8
Number without gas or electric light	12,268	2.2
Number without indoor water closets	22,699	4.1
Number without bath tub or shower	87,560	15.9

In any program of large-scale rehabilitation of slum and blighted districts, many structures and dwelling units which need major repairs would necessarily be demolished along with neighboring units which are unfit for habitation. It may be logically assumed that any #4 class or unfit buildings or family units which might be included in any rehousing program owing to the fact that they lie in areas which are otherwise generally excellent, would be more than offset in number by those buildings in a superior condition but which lie within slum areas for which the only rational treatment would be a comprehensive demolition and replacement program necessitated by the blighted condition of the entire area. Therefore, based upon these findings, a slum-clearance program of about 10 per cent of the dwelling units in these 65 communities seems a reasonable estimate.

The price class or rental range of dwelling units is of considerable interest considering low-cost housing. The following has been developed by the inventories in these 65 communities:

## C. DWELLING UNITS IN

THE LOW-COST CLASS	NUMBER	PER CENT
Renting for \$15 or less a month	36,422	6.6
Valued to \$1,500 or under	2,088	0.4
Total low-cost accommodations	38,510	7.0

This shows the existing accommodations available for those families in the lowest income group and likewise, when considered with the following data, demonstrates the need for low-cost housing.



**D. CROWDING CONDITIONS**

	NUMBER	PER CENT
Dwelling units crowded .....	81,378	14.8
Dwellings units over-crowded..	3,577	0.65
Dwelling units greatly over-crowded .....	329	0.06
Dwelling units crowded or worse	85,284	15.51
Dwelling Units with extra or "doubled-up" families .....	29,359	5.3

From the foregoing considerations, if 7.0 per cent of available accommodations are in the lowest price class and if 15½ per cent are crowded or worse and if 5.3 per cent of all dwelling units contain "doubled-up" families, there is little or no question that a comprehensive slum-clearance and low-cost housing program would meet an urgent demand.

Another development by the Real Property Inventories merits more than passing note, namely the condition of occupancy and vacancy among the dwelling units unfit for occupancy.

**E. UNFIT ACCOMMODATIONS**

	NUMBER	PER CENT
Total dwelling units .....	550,056	100
Dwelling units unfit for habitation .....	30,321	5.5
Vacant dwelling units in structures unfit for habitation....	6,931	1.3
Percentage of occupancy in unfit dwelling units .....		77.2

This extraordinary high percentage of occupancy in the unfit dwelling units is an excellent demonstration of the need of proper sanitary and wholesome accommodations which exists among those of the lowest income groups, and likewise demonstrates the need of protecting these more unfortunate citizens against improper surroundings in much the same way that public opinion recognizes their right to protection against spoiled meat and other hazards.

Without considering any of these conditions of overcrowding or extra doubled-up families, or of dwelling units unfit for habitation, the vacancies in dwelling units amount to a gross total of about 9.5 per cent. It should be remembered, however, that this vacancy of almost 10 per cent is *apparent vacancy* and may give only a picture of temporary conditions. A further analysis should be made considering at least three important factors, namely, (1) the number of dwelling or family units which are unfit for habitation, (2) the number of "extra" or doubled-up families, and (3) some allowance for a "normal" vacancy percentage. These three considerations will be studied each in turn.

The total vacant dwelling units, 52,022, or 9.5 per cent of the total, would be reduced to 21,701 or show a percentage of vacancy of only about 4.2 per cent of the total available habitable dwelling units,\* if the unfit dwelling units, whether occupied or vacant, were somehow removed from use. It may not be possible to condemn and demolish these structures in the immediate future, but at all events it is reasonable to suppose that, with the return of better business conditions, a large

proportion of them will be abandoned by their present occupants if they are not replaced or restored.

A further reduction in the number of vacant units (over and above that reduction which would be caused by the removal of the unfit dwelling units from the market) will take place when economic conditions become better, permitting a large proportion of the total number of extra or doubled-up families to seek new quarters of their own. Inasmuch as the number of extra families, totaling 29,359, is probably an understatement of doubled-up families owing to the difficulty in fully enumerating all such, it may be considered probable that vacancies will completely disappear because, of these 29,359 known extra families, only 21,701 will be able to find quarters in vacant habitable accommodation, leaving a balance of 7,658 families for whom no habitable dwelling units will be available. For the purpose of comparison this potential shortage of dwelling units or family accommodations of 7,658 would amount to 1.3 per cent of the total 519,735 available dwelling units which are now fit for habitation.

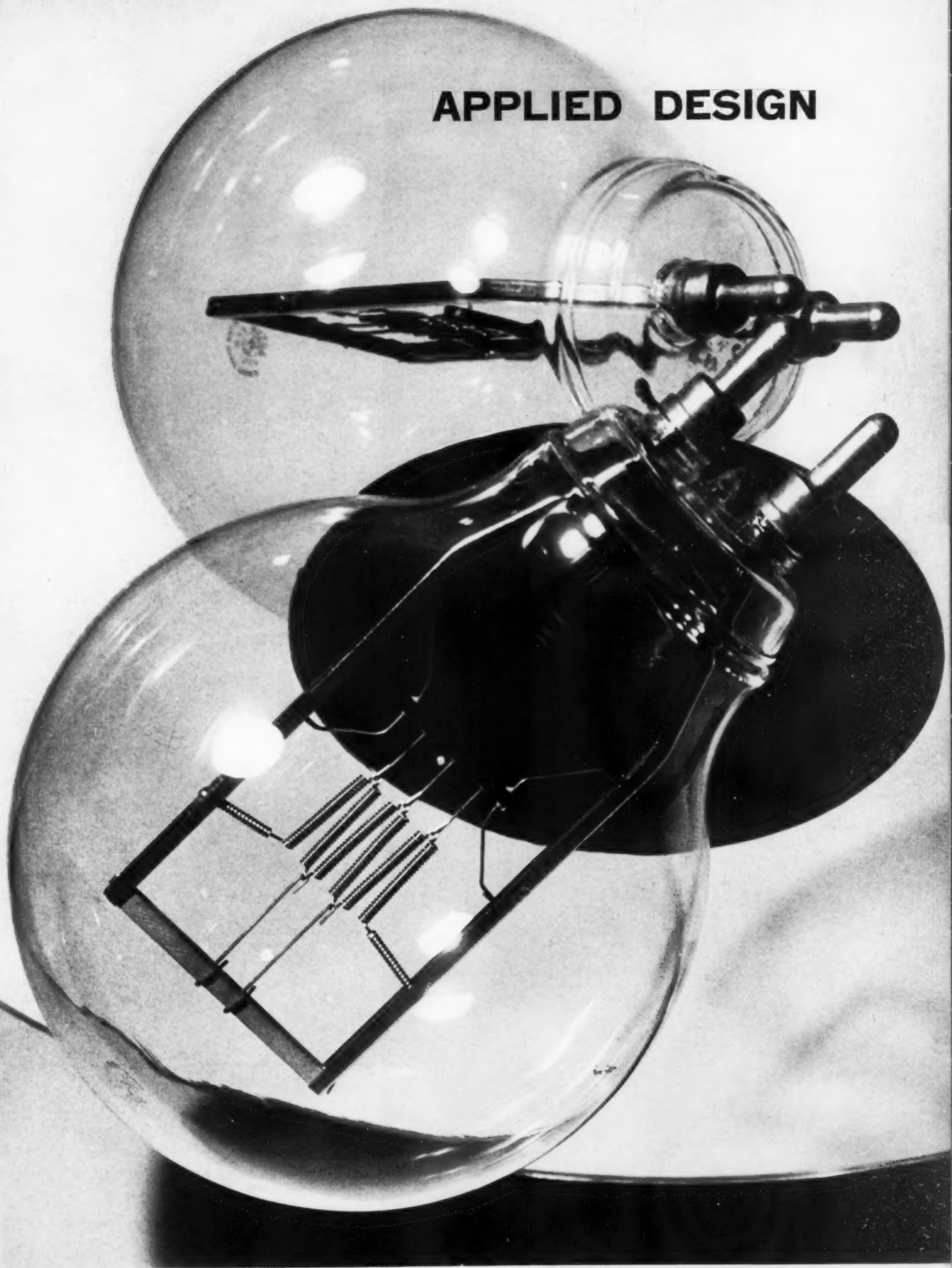
Normal vacancy allowance has been previously mentioned and some recognition should be given to this in any analysis of future condition. Structures and dwelling units are all more or less fixed in location, in their facilities and even in their price class, and can only be modified within reasonable limits. Some allowances must be made for lack of adjustment of existing facilities to the intimate needs and special demands of prospective tenants. For instance, a dwelling unit, whether it be a single-family house or a flat, may be in the desired location and within an appropriate price class, but may have an utterly unadaptable arrangement or number of rooms for an available tenant. Again a vacancy in the \$100 rental class does no good to a man earning \$20 a week nor will a vacancy in a slum interest a well-to-do family demanding a good neighborhood and all modern improvements. Factors of this sort require some margin of vacancies before tenants can be able to secure reasonable adaptable accommodations. In general, a vacancy of about 3 per cent is usually considered a "landlord's market" and only with vacancies at about 5 per cent does a "tenant's market" begin. It would be therefore reasonable and proper to consider that conditions of a landlord's market could prevail with a 3 per cent vacancy as a minimum. On such an estimate, and with a potential shortage of 1.3 per cent or 7,658 dwelling units, after considering the removal of unfit dwelling units and the expansion of the extra or "doubled-up" families into quarters of their own, the potential shortage would become 4.3 per cent and 22,348 dwelling units with allowance for the minimum of 3 per cent for "normal vacancies."

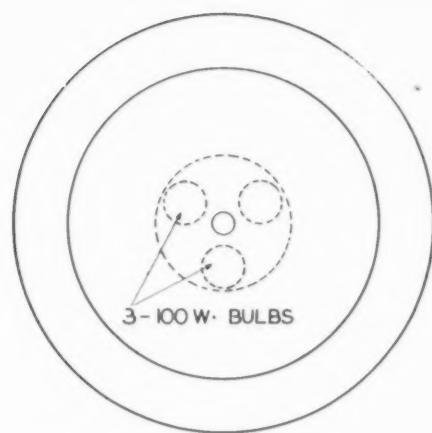
In this analysis no attempt is made to assert that the present apparent vacancy amounting to 9.5 per cent is actually a present shortage of 4.3 per cent in the housing market. However, it is believed that these considerations adequately demonstrate that the present housing market is not in nearly so bad a condition as first analysis might indicate. There are several other considerations to which very serious thought should be given—the natural increase in population in the State since the 1930 census as well as the very large number

\*Note: 519,735 habitable units or 550,056 less 30,321 units.

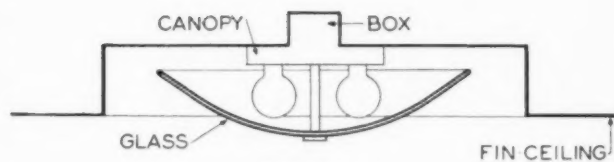
(Continued on page 34, Advertising Section)

# APPLIED DESIGN



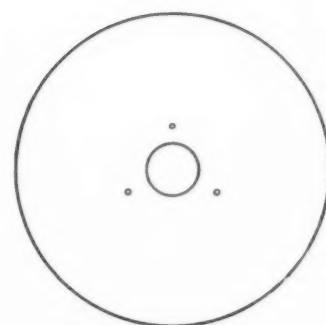


REFLECTED PLAN

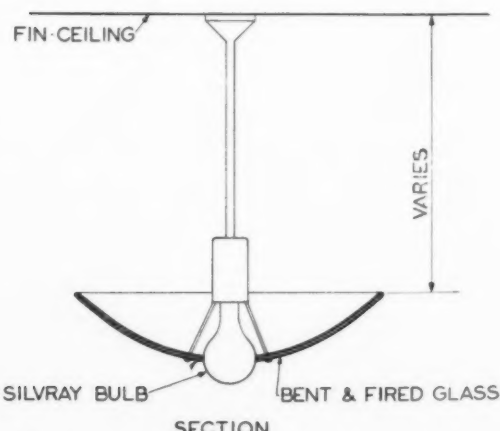


SECTION

0 2 4 6 8 10 12 14'



REFLECTED PLAN



SECTION





Photographs by Zimmerman

ABOVE:

**CEILING LENS BY CORNING GLASS WORKS.** The pyrex glass bowl is shaped for light diffusion. Originally designed for use as railroad headlights.

UPPER LEFT PAGE:

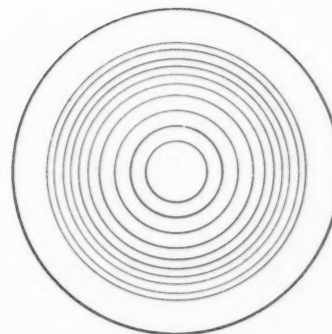
**RECESSED CEILING FIXTURE BY MAURICE HEATON.**

This bowl is obtained from a flat circular piece of transparent glass which is bent at high heat on a cone-shaped mold. Colored rings are obtained by applying a colored glaze (ground glass) on a spinning wheel, and the frosting by spraying a white translucent glaze, heavily where the bulbs show and lightly towards the edges. The glaze is fired on the surface of the glass when it is bent.

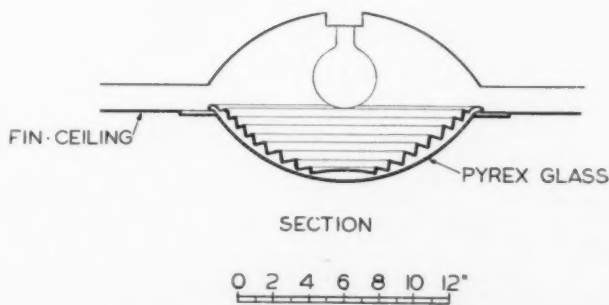
LOWER LEFT PAGE:

**SUSPENDED CEILING FIXTURE BY MAURICE HEATON.**

The glass in this case is obtained as above, except that a hole is cut in the center of the original flat piece. In bending, that hole may stretch as much as  $\frac{1}{2}$ ". The glass is so well annealed that it can touch the bulb without causing breakage.

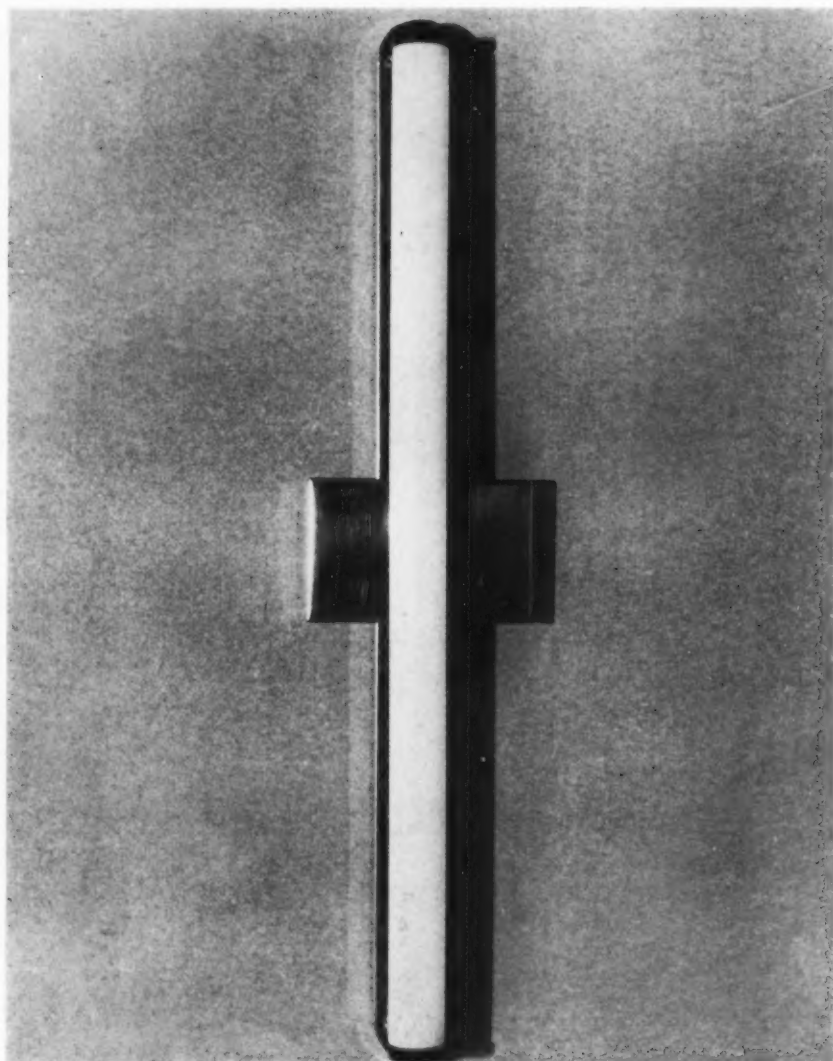


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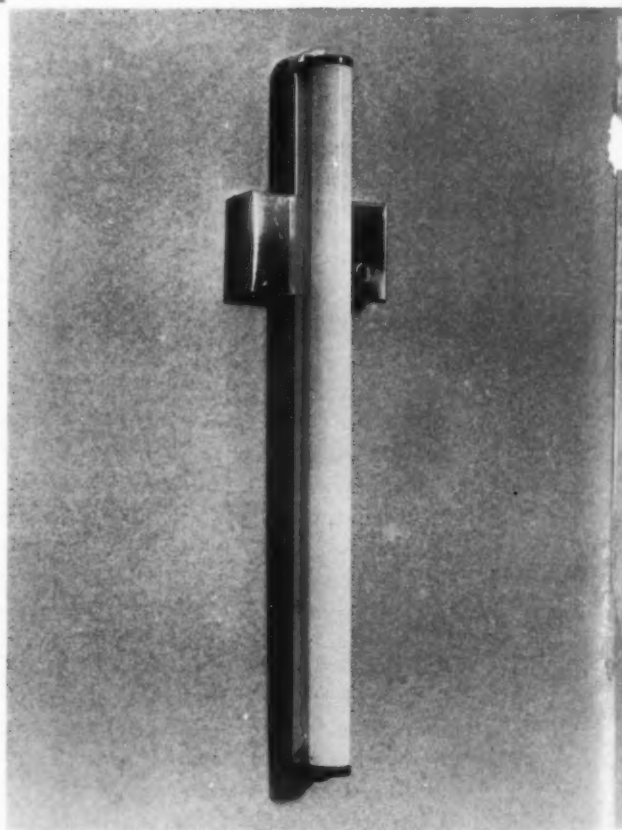
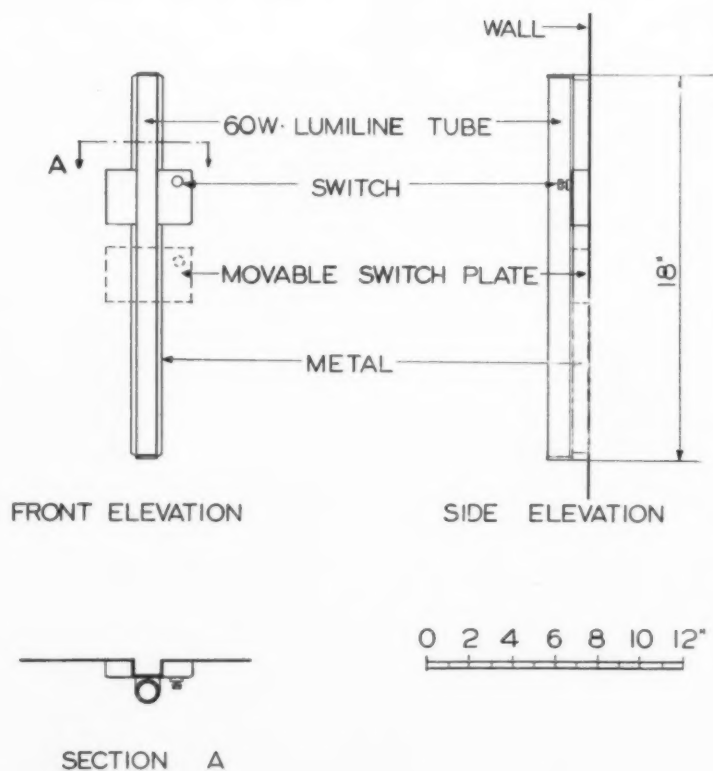
SECTION

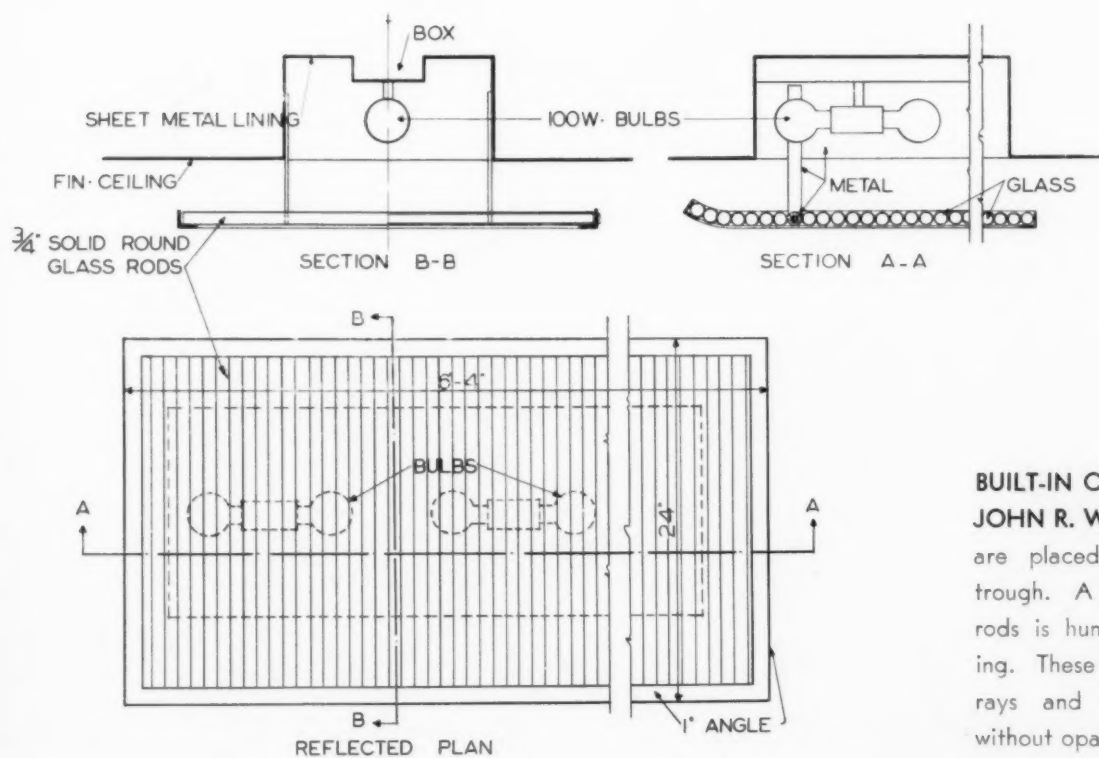
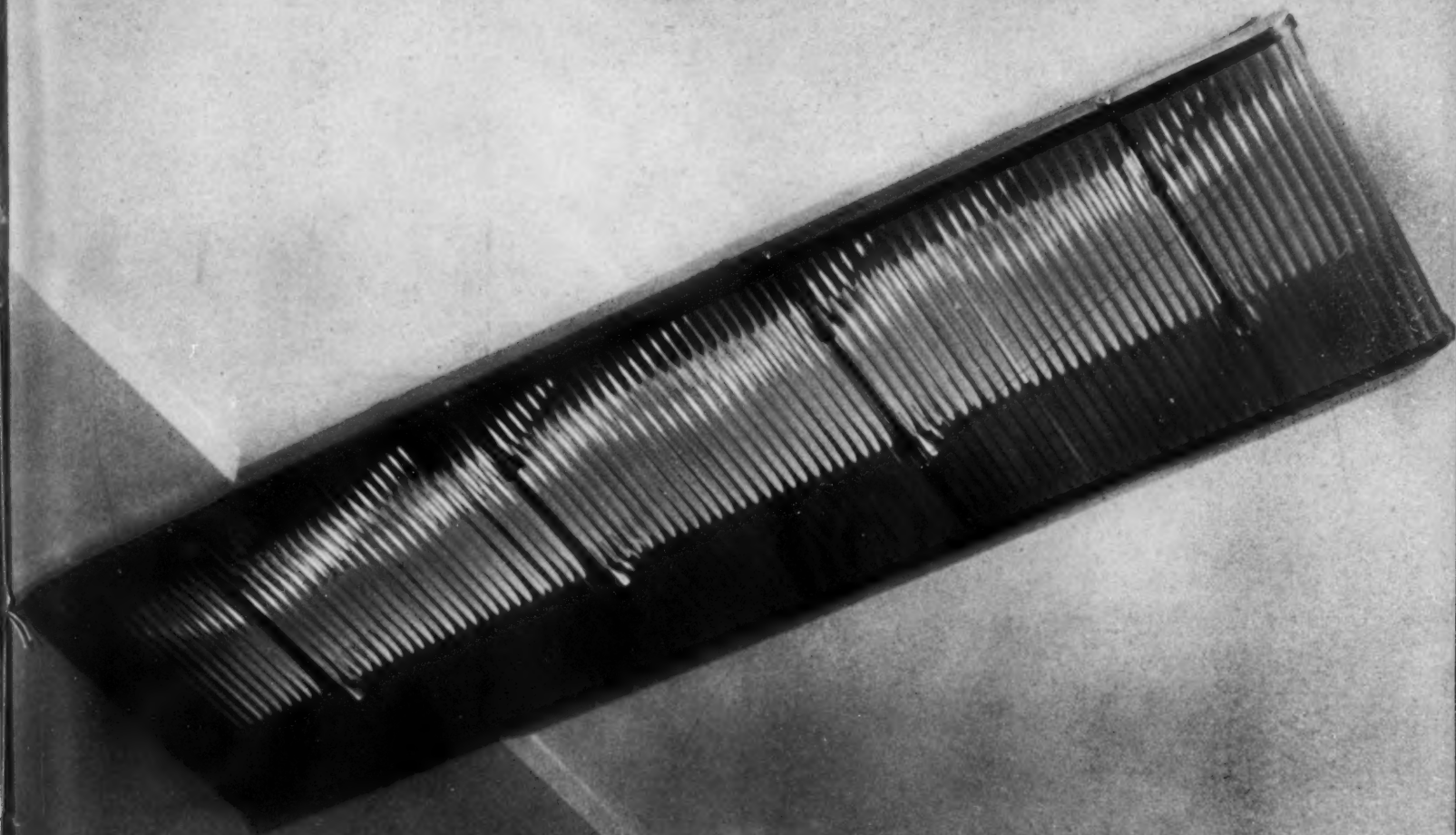
0 2 4 6 8 10 12"



Photograph by Zimmerman

**LUMILINE BRACKET BY JOHN R. WEBER.** These brackets may be had in 12" or 18"-lengths with 1"-diameter bulbs, 30 or 60 watts. The adjustable switchplate allows bracket to be installed above or below the outlet box. The light source may thus be had in the most desirable height, even if the outlet box should be above or below average level. Bracket may also be used horizontally.





**BUILT-IN CEILING FIXTURES BY JOHN R. WEBER.** The light bulbs are placed in an open metal trough. A panel of clear glass rods is hung 4" below the ceiling. These rods break the light rays and diffuse their source without opaqueness.



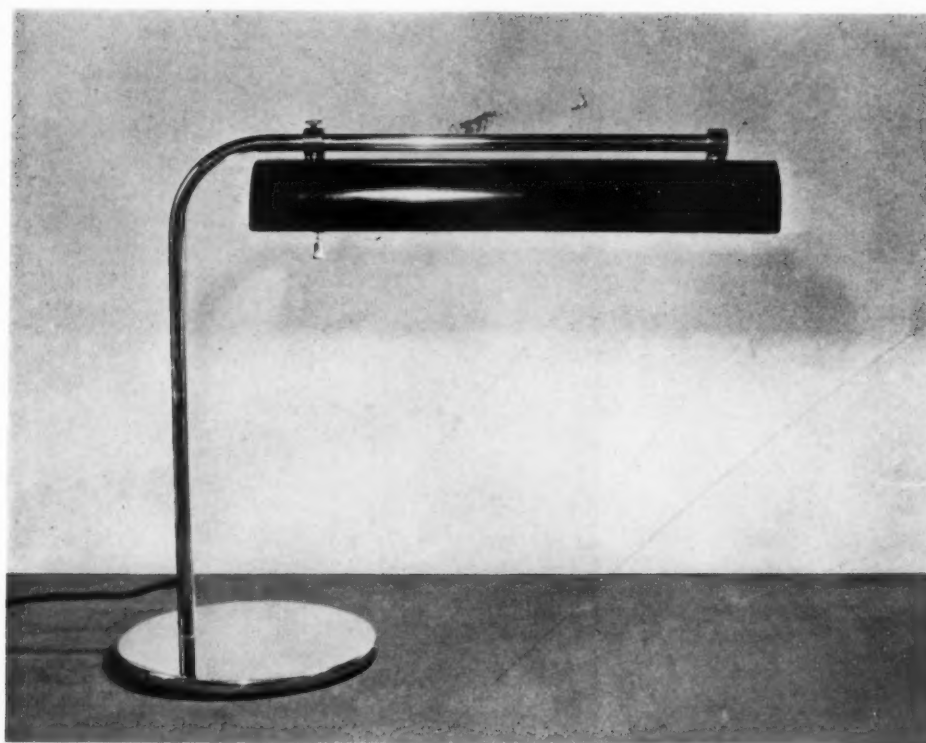


*Photograph by Zimmerman*



LEFT PAGE:

**FLOOR - AND - DESK LAMP BY JOHN R. WEBER.** The three pivot hinges allow change in position of light trough proper from 5'6" straight above base to 3'0" above floor with 3-foot horizontal lever arm (thus reaching beyond middle of a good-sized drafting table). Trough proper revolves so that it may also be used in horizontal as well as vertical position. Satin chrome finish. Black catalin knob.



*Photograph by Ruth Bernhard*

ABOVE, THIS PAGE:

**DESK LAMP BY HOWE AND LESCAZE, ARCHITECTS; WALTER BAERMANN, DESIGNER**



*Photographs by Zimmerman*

RIGHT:

**DESK LAMP BY JOHN R. WEBER.** Height adjustable, with stem on horizontal pivot. Trough turns also. Base of black grooved bakelite with lead weight insert. Gunmetal plated.



FLOOR LAMPS DESIGNED







BY FREDERICK J. KIESLER





*Photograph by Zimmerman*

**FLOOR LAMP BY JOHN R. WEBER.** G-E three-light lamp: 1 bulb, 1 switch, 3 different intensities. Top part revolves. Low intensity filament is used for reading when reflector is turned downward as shown. Turned up, it is used for general indirect illumination. The light may be stepped up 150% if more brightness is desired.



(Left)  
**NORMAN BEL GEDDES:** Eight years' experience in industrial design. He has created radio cabinets, furniture, refrigerators, office, restaurant and airplane interiors, the medal to commemorate the silver anniversary of General Motors, which is part of the permanent exhibit at the Metropolitan Museum of Art, gas stoves, window displays, automobile tires, and gasoline service stations. (Photograph by Maurice Goldberg.)

(Right)  
**GEORGE HOWE:** From 1913 to 1928 in partnership with Walter Mellor and Arthur L. Meigs in Philadelphia; from 1930 to 1934, with William Lescaze. Notable among his architectural works are the Philadelphia Savings Fund Society Building; "Square Shadows," the home of William Stix Wassermann in Whitmarsh, Pa., which was the first completely modern residence to appear in the Philadelphia countryside; the Speiser town house in Philadelphia; the American War Memorial at Bony in France. He has also designed the Oak Lane Country Day School in Philadelphia, the Hessian Hills Schools, Croton-on-Hudson, the project for the Chrystie-Forsyth low-cost housing development, and, among others, the interiors of the Trans-Lux Theatres. (Photograph by Frances R. Waite.)

### A NEW AND SIGNIFICANT TYPE OF PARTNERSHIP

has been formed by George Howe, well-known architect, and Norman Bel Geddes, industrial designer. It is the announced purpose of the organization to provide domestic or commercial building owners with a broad survey of mechanical and architectural trends for their consideration and use. With a fresh outside point of view it sets before the industrialist the needs and demands of the public as related to his established technical and business methods in such a way that he can reach decisions as to products and policy affecting not only a particular problem, but often his whole field of activity. The firm offers service in the following categories of design: consumer research; engineering; production; merchandising; architecture—domestic, commercial, industrial; theatrical; landscape; exterior and interior illumination; household and mechanical equipment; decoration; furniture; accessories; merchandising display; railway equipment; ships; yachts; motor cars; airplanes; theatrical production; settings; stage lighting; stage direction.



## ILLUSTRATED NEWS

### FEDERAL RESERVE BOARD BUILDING

The Federal Reserve Board has selected Paul P. Cret of Philadelphia as the architect for its new building on Constitution Avenue in Washington, D. C. Mr. Cret was chosen by a jury on the basis of designs submitted by nine architects who were invited to participate in a competition. The jury's choice was approved by the Federal Reserve Board. It is expected that the architect will begin work immediately on the preparation of final plans and specifications.

The jury which passed upon the designs was composed of three architects and two laymen. The architects who served were John W. Cross, New York City; William Emerson, Dean of the School of Architecture, Massachusetts Institute of Technology, Boston, and John Mead Howells, New York City. The other members of the jury were Frederic A. Delano, Chairman of the National Capital Park and Planning Commission, and Adolph C. Miller, a member of the Federal Reserve Board. The program for the competition was prepared under the direction of Everett V. Meeks, Dean of the School of the Fine Arts in Yale University, who has acted as the Board's professional adviser.



Winning design in competition for a building for the Federal Reserve Board in Washington—Paul P. Cret, architect

### NEW TYPE OF INSULATED GREENHOUSE

The Boyce Thompson Institute for Plant Research, Yonkers, New York, has developed an insulated greenhouse heated and lighted by Mazda lamps. Approximately spring-time growth and flowering were produced during the winter months on such varieties of plants as snapdragon, sweet pea, fuchsia, and begonia. Snapdragon plants placed in the house on December 10 when 2 to 3 inches tall had reached the flowering stage and were in flower during the last week of January.



Greenhouse at Boyce Thompson Institute heated and lighted by Mazda lamps.



Peter A. Juley & Son

Perspective drawing of the proposed Liberty Bridge to be built between Brooklyn and Staten Island at entrance to New York harbor, the longest bridge span in the world. Robinson & Steinman, engineers.



At the Milwaukee Convention of the American Institute of Architects: Ralph Walker, retiring president of New York Chapter, in foreground, and in the background, Hobart Upjohn, the new president.

The only heat supplied during the entire winter was that emitted by 10 ordinary Mazda lamps arranged in 2 rows of five each above the bench where the plants were grown. Each lamp was rated at 500 watts. The lamps were operated by a thermostat and relay which turned them on whenever the air temperature inside the house reached 62° F. As soon as the temperature had reached 68° F. the lamps were turned off again automatically by the thermostat and relay. In practice it was found that the lamps never came on during the day while the sun was shining, even if the outside temperature was at zero. Most of the artificial light was supplied at night. A little additional light was supplied when the plants needed it most.

The house was built similar to a large refrigerator, with double walls of galvanized sheet steel, 16 gauge, nailed to a framework of 2" x 6" wooden structural members. The walls, floor, and sheet metal sections of the roof were filled with dry sawdust giving in effect a 6-inch wall of insulating material throughout except for a row of eight 6-foot single-glazed storm sash along the south face of the building. The sash are hinged at the top end so that the bottom end can be propped open for ventilation. All joints inside the house are soldered, and the storm sash are made to fit as tightly as possible. The single door to the house is of the refrigerator type with 6 inches of sawdust between the inner and outer face.

When additional light is supplied, it is important to use additional carbon dioxide. This can be provided by placing approximately a 40-lb. piece of dry ice in a well-insulated double-walled container inside the house. Owing to the slow evaporation of carbon dioxide, this piece will last approximately a week to ten days. The slow diffusion of the gas through the walls and the door makes possible a higher concentration than is found in ordinary air. Since the plant uses this gas in air as a sole source of carbon, it is possible to increase the growth and flowering by increasing the concentration in this way.

### LONGEST BRIDGE SPAN

The proposed Liberty Bridge will be built across the Narrows at the entrance to New York Harbor between Brooklyn and Staten Island. A bill has been introduced at Albany to establish a bridge authority for the construction of this project. It is hoped to secure Federal financing.

With a main span length of 4,620 feet, this will be the longest bridge span in the world. The towers will be 800 feet high. The bridge under-clearance will be 235 feet, to clear the greatest mast heights of any existing ships. The total estimated cost, to provide a bridge with eight highway lanes and two 10-foot sidewalks, is \$40,000,000. The design has been prepared by Robinson & Steinman, engineers, and Theodore E. Blake, architect.

# RETAIL STORE PLANNING

REQUIREMENTS—GENERAL STORE, APPAREL SHOP, DRUG STORE—STORE LETTERING—STORE LIGHTING

APPAREL SHOPS IN MILWAUKEE . . . . ELMER A. JOHNSON, ARCHITECT



Photograph by Kenneth K. Stowell



*Photograph by Gustav Anderson*

FURNITURE STORE IN NEW YORK CITY . . . J. LEWIS SINCLAIR, ARCHITECT

## THE RETAIL STORE

Compiled by **FREDERIC ARDEN PAWLEY**

**S**TORE planning involves two distinct phases: (1) the general consideration of merchandising principles and (2) the detailed study of structural and service requirements. Merchandise requirements are variable, and types of customers are legion, but a discussion of some fundamental considerations may help to clarify the architectural problem and to emphasize those planning features which are most important in merchandising. Much detailed data obviously must be revised for each new store design problem. This article therefore presents first an outline of merchandising principles and then a listing of specific data in reference form. These data have been compiled from many authoritative sources and represent progressive practice. A brief bibliography is appended for additional reference.



# (1) GENERAL DATA

## LOCATION

The trading area, volume and type of traffic, parking facilities, day or night business, competition with or advantageous proximity to similar stores, transportation facilities and location of transit stops, rentals, banking facilities, trend of population and trade development of neighborhood are all necessary considerations.

"The measurement of a retail market resolves itself into a scientific study of a community. . . . Just as the manufacturer and banker have realized the importance of research in their management problems and have proved the advantage of knowledge over guesswork in business, so may the retail merchant benefit by a study of his problems in the light of facts scientifically gathered. Since the purpose of any retail business is to sell merchandise, thereby making sufficient profit to compensate for the energy and capital expended, it seems only logical that the merchant should desire to obtain all the information possible relative to his market."

Retail Store Problems. U. S. Department of Commerce.

Corners are estimated to be 30 per cent more valuable than inside lots. They draw traffic from two streets and offer better natural light and more window area, but crowding minimizes this advantage.

"A corner store has the choice of an entrance from each street or one at the corner. The corner entrance makes it necessary for customers approaching from one direction to walk the full length of the building before entering the store. Two entrance ways tend to influence customers to go through the store. An entrance on the corner in addition to the other two street entrances might have a tendency to divert traffic, so that many customers would come in through the nearest street door and go out at the corner, and this diversion might materially cut down returns from an otherwise effective display space within the store."

Retail Store Problems.

The upper side of a street which is not level is the more desirable.

Shade is valuable in summer and better for displays, but winter sales volume may be higher and rents cheaper on the sunny side of the street.

"One side of a street is usually more popular than the other. There may be several reasons for this. If the street is not level, the upper side is usually more traveled than the lower. This may be accounted for by the fact that the upper side of the street is cleaner, or that 'the human tendency is to get on the upper side of things.' Then, again, there is the question of the shady or sunny side of the street. In the summer the preference for the shady side becomes quite marked, and this is especially true for women, who do much of their shopping the hottest part of the day. Sunlight is always an important factor to be considered in locating a retail store. Shoppers naturally seek the protection of the shady side of the street in the summer, and the sunlight affects the displays that the store makes in its windows. Satisfactory displays are more difficult to make in sunny windows than in those in which the light is controlled or shaded. . . . It is possible, however, that for certain reasons the sunny side of a street may be preferred. An analysis of sales may show that the largest business is done in the winter months, during which time the traffic may prefer the sunny side. The rent is usually cheaper on the sunny side. Another factor in determining the preferable side of the street is the convenience to the street-car stops. When a car stops people usually go to the nearest curb, rather than cross the street."

Retail Store Problems.

Exclusive specialty shops need not be in a high-rent shopping area but should be easily accessible.

"Some stores go well in groups. One reason for this grouping is the convenience of the customer, as it affords opportunity for the purchasing of a number of different kinds of articles in one vicinity. Another advantage of locating competing stores close together is the possibility of drawing trade from customers who had planned to go directly to a competitor. The stores thus established are not always competing stores. Very frequently they arrange themselves into complementary groups cooperating with each other in the attraction of custom and in the making of sales. Stores dealing in men's goods are often found on one side of the street, while stores dealing in women's goods are found on the other.

"The logical site is that one which offers the best opportunity to sell goods where people naturally come to trade, either because of convenience or because of habit. If the best site is not obtainable or carries an exorbitantly high rental, and therefore an inferior site is chosen, success depends largely upon the recognition of the economic disadvantages resulting from the location and the cost of special attractions necessary to overcome them."

Retail Store Problems.



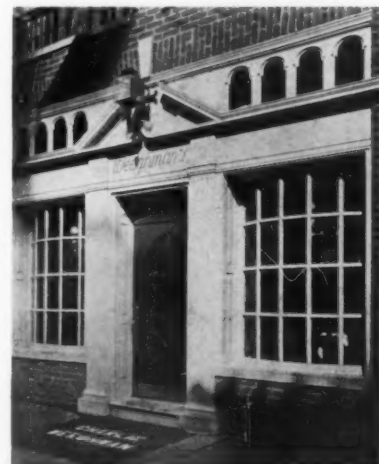
Architectural Review

A shop in London designed by Wells Coates, architect. The front is in oak and glass.



Zimmerman

A 2-story shop front in Times Square, New York City.



A restaurant front in New York City designed by Ross-Frankel, Inc.



*Hedrich-Blessing*

A dress shop in the Palmer House, Chicago, designed by Sobel and Drielsma, architects.



*Hedrich-Blessing*

An apparel shop in Detroit by Sobel and Drielsma, architects. Façade of Carrara glass held in place by aluminum supports.



*Bonney*

A Paris shop front designed by B. J. Klotz. Façade of oak.

## ATTRACTION

The first problem of the merchant is to attract the attention of potential customers and to give them favorable impressions. Uncluttered surfaces, legible signs, good color selections, intelligent window display and lighting are all undeniable attractions for the exterior. Comfort within, based on easy circulation, clarity of plan, accessibility of merchandise; quick service resulting from proper location of stock; effective illumination, good acoustics, and air conditioning—all of these will make customers return.

## CIRCULATION

This might be called routing: it is the familiar problem of making the customer see as many varieties of merchandise as possible so as to induce additional sales. In large stores an appearance of activity is desirable; in smaller stores and shops crowding must be avoided.

Aisles and vertical circulation can be planned in such a way as to influence sub-consciously the customer's path. The shopper instinctively chooses the wider of two or more aisles or the one to the right. Departments with greater drawing power should be placed so that customers must pass other displays. Service departments, such as the cash desk and wrapping center (if used), should be so located.

Arcades or passages to transportation lines or to other places provide effective spaces for advertising or impulse displays. Self-service or quick service is indicated for such locations.

Special attractions, such as telephone booths, and in large stores, beauty parlors, children's barber shops or playrooms, lunch rooms, are sometimes planned to attract shoppers past impulse displays. These services are often not directly profitable. Location on a main floor balcony or mezzanine is preferred. Even a small book store may work on this basis and have exhibition space for temporary art shows as an attraction.

"The question of locating the soda fountain and cigar counter is something to be decided by a close study of the individual store. Fountain goods in the majority of cases are of a semi-convenience type. Frequently the fountain can well go to the front of the stores on busy corners and in the rear in stores in small towns and neighborhood locations. The cigar counter almost universally is placed in the front of the store.

"Some proprietors believe that the fountain brings into the store people who would not come otherwise. In such cases, if possible, the fountain should be placed back in the store in order to get as much merchandise as possible before the fountain customers. On the other hand, this often is impractical as this type of customer might not enter if the fountain were removed from the front door.

"A good plan is to check the value of the fountain in profits in comparison to space occupied. Some stores report that the fountain makes a substantial part of the entire store profit; others learn that the space required by the equipment and tables for customers is out of proportion to earnings but justified as a leader to other sales.

"Services, such as telephone and postal station, are placed in the rear of the modern store. The center of the room in a well arranged store is low and the customer has no trouble in finding what is wanted. The man who wants to use a telephone, in passing attractive tables of merchandise, is often reminded of and buys items he needs."

Small Store Arrangement. Domestic Distribution Department, Chamber of Commerce of the U. S.

## CLASSIFICATION

Departmentizing helps clarify the store plan, gives good stock control by showing which lines of merchandise are most profitable, facilitates more frequent inventories, tends to develop expert sales help who keep stock in better condition, and to some extent may indicate efficient personnel.

Within each department wares may be divided into three classes—convenience, impulse and demand goods. An entire department may belong to one of these classes or may include all three. As far as possible department or class location should be governed by the characteristic of these classifications.

Convenience goods are usually low-cost items which will be bought hurriedly at the nearest store. Profit is small but good-will is worth cultivation for frequent return. Locate for quick service but not nearest entrance.

Impulse goods are often luxuries sold with high margin of profit. Locate wherever they will best catch the customers' attention or where there is any waiting: near entrance, at service center, at elevator. Displays is most important factor.

Demand goods are staples of a substantial nature which customers come most often to buy. They are items for which a customer will go to a particular store with decision already made for their purchase. Easy accessibility of stock to sales staff is more important than display.



Zimmerman

Shopping goods, a fourth classification often made, differ from demand items in their need for accessibility to customer and display so that comparison can be made with competing wares.

All classifications should be made evident. Prominent display of typical items will help more than signs unless goods are of great variety and similar in size as in a drug store.

Related departments should be grouped together not only to suggest additional sales but to make it easier for sales-persons to assist in adjoining departments.

Bargain departments should be isolated since bargain hunters are not good prospective purchasers of other goods. Extensive display of bargains near regular stock tends to lower the character of the store.

The self-service checkout plan used mainly in the grocery line with open display and/or automatic dispensing machines and change-makers may reduce pay roll, shorten customers' waits and handle a larger volume of sales in peak hours. Provide basket racks near entrance, table or counter space for customers and checking counter with wrapping materials at exit. One-way circulation.

## DISPLAY

Display facilities should be subordinate to the merchandise. A mechanized display may attract brief attention but usually is not sufficiently subordinated: interest is held by the workings of the device, not by the wares.

Similarly, color should be used to focus attention on merchandise. This can be done, where colors are of considerable variety, with neutral backgrounds which will harmonize with any and all of them; or, when goods have one predominant hue, the use of a complimentary scheme will add intensity to the display.

Stores or departments with wares which will not be injured by handling now sell them from open display. Advantages are many: (1) Encouragement of self-service which results in greater volume of sales per clerk. (2) Useful floor space is increased through elimination of counter and bulky show cases. (3) Lower part of walls is made useful for selling-display. (4) No danger of hidden accumulation of non-selling stock. Quick check on wares that do not sell.

Open display tables with tops divided into adjustable compartments are used in island groups, helping to control circulation. Open wall shelving and display fixtures with several levels are recommended. Theft is reported to be negligible, especially when high fixtures obscuring view of tables and racks have been properly eliminated.

Merchants are coming to realize the primary importance of flexibility to meet competition by improvements. Much floor equipment is now made easily movable. Window bulkheads, tables, racks, counters, refrigerators or refrigerated cases, even some shelving are now put on wheels in the modern grocery store. Shelving is adjustable and easily movable. Fruit and vegetable racks are removable and have provision for spraying and/or refrigeration.

Interior show windows built in wall or used between rooms are an effective means of display for wares requiring protection or special lighting.

Locate the cash register so that clerk can do nothing else while making change.

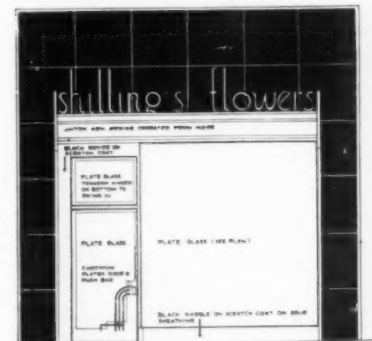
## NON-SELLING AREAS

Receiving department for unpacking, checking and marking goods.

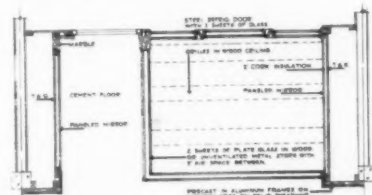
Reserve stock room is often a cause of overbuying.



General store façade.



ELEVATION



PLAN

Design for a flower shop in Los Angeles by J. R. Davidson.

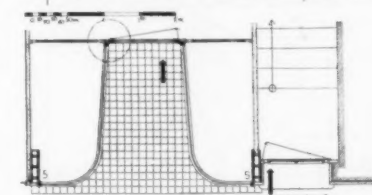
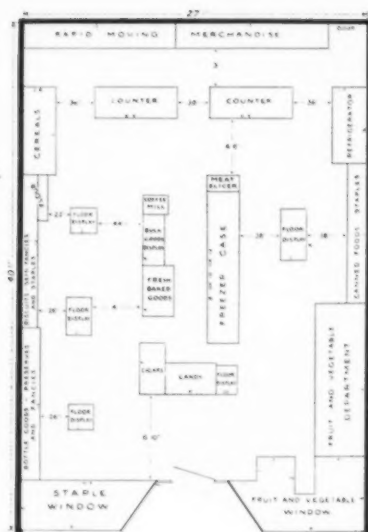


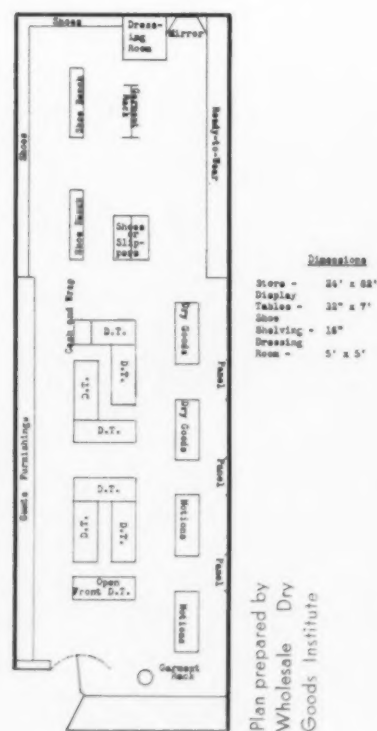
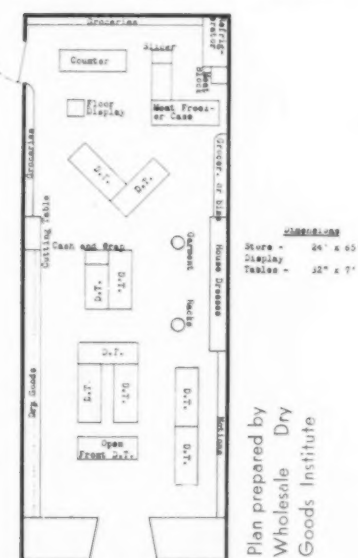
Illustration from LADENBAU

Design for a beauty shop by Joseph Ringel, architect.





From BETTER GROCERY STORES



Seasonal demand makes use of separate warehouse space preferable to using more expensive area in store.

"The small store can handle its delivery orders, as a rule, from the wrapping counter, the orders going out fast enough to prevent cluttering of aisles and delays to either type of customer. When the sales volume reaches a point at which confusion occurs in the retail selling space, it is advisable to provide a separate delivery room. Often as few as 50 orders daily justify an order, assembly and delivery room.

"No selling is done in the order room. It is solely for delivery orders. Experience shows that this plan minimizes mistakes in filling orders, does away with confusion in the sales room and makes for better service all around. Aisles are free of outgoing delivery boxes.

"The order room can be added easily to the floor arrangement of the smaller type store, by removing the rear wall on one side and substituting for it a low 40-inch stock shelf. This throws one-half the back room into an order room. Customers can see into the order room but will not enter. The activity of assembling orders gives a busy aspect to the store without interfering with counter customers' service. Rear doors are used by delivery clerks."

Small Store Arrangement. U. S. Chamber of Commerce.

Delivery department for sorting, checking, loading. In larger stores conveyor systems speed up this process with moving belts or spiral gravity chutes. Loading platform for trucks. Garage usually is separate or eliminated in favor of cooperative delivery service.

Offices, credit department, 'phone order department and such accessory services as fitting rooms, alteration rooms and millinery workrooms must be provided, all near respective selling departments. Services such as lockers, rest rooms and lavatories for clerks become large elements in department stores. Even in smaller shops conveniences such as water coolers, telephones, lavatories and rest alcoves are offered customers.

## MAINTENANCE

Materials should be resistant to wear and easy to clean. Walls should have sanitary cove bases and equipment bases should stand up under wet-mopping or scrubbing. Easy and economical maintenance is assured by keeping surfaces and decoration simple.

Provision should be made for easy collection of trash (chute and bin) and incineration or possible salvage by shredding and baling.

DRUG STORE IN BURLINGTON, VERMONT . . . LOUIS S. NEWTON, ARCHITECT



## (2) SPECIFIC DATA

### SHOP FRONT

The merchant is interested in distinctiveness, adequate display area and an effective entrance. A good sign or trade symbol against a simple background of material interesting in texture or color is frequently used. Another method is to provide a view of the store interior, thus making the window display doubly effective. In warmer climates it is possible to open the front entirely if the benefits of air conditioning are not sought or necessary.

### SIGNS

Maximum legibility for day and night illumination. Graduated in size and located for visibility from across street, from passing cars, and by pedestrians.

Lettering in dark silhouette against lighted background recommended. Projections from building-line and types of illumination are governed by local code and usually require permits.

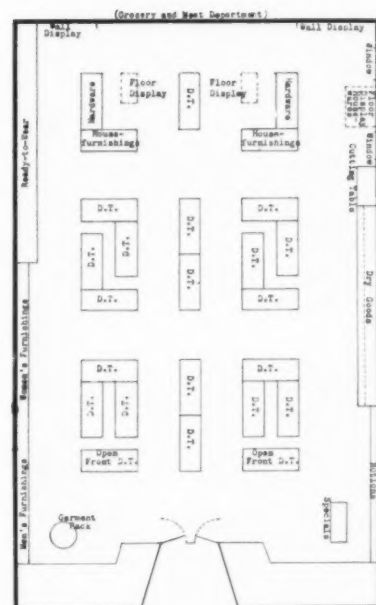
Gaseous tubes for color: Alternating current with small local transformers or converters for direct current—as near sign as possible to shorten heavy copper conductors. Neon (red) uses 6 watts per foot of lettering tube; blue or green each 7 watts; white or yellow, 20 watts. A new type of tubing permits several parallel color channels in small section which makes new combinations practical.

Photo-electric and/or time control for signs.

### ENTRANCE

Island windows and irregularly shaped entrances intended to draw window shoppers into store are often wasteful of space and doubtful in effectiveness.

Provide automatic door-opening device with photo-electric control. Doors operate when a ray of light, falling on a photo-electric cell, is interrupted. The door opens long enough for a person to pass through, then closes automatically.



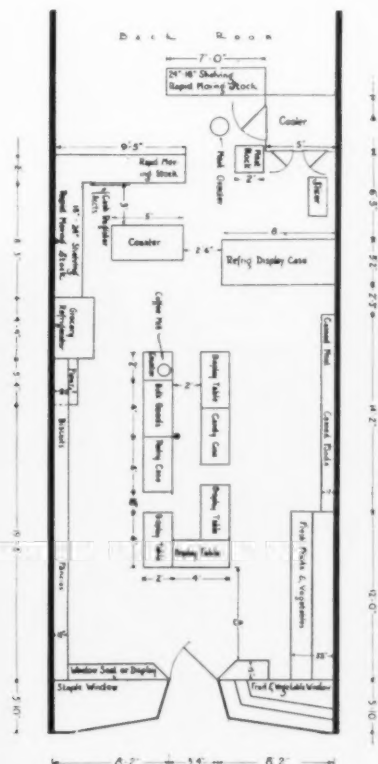
Dimensions  
Store - 45' x 113'  
Display Tables - 32' x 7'

Plan prepared by  
Wholesale Dry  
Goods Institute

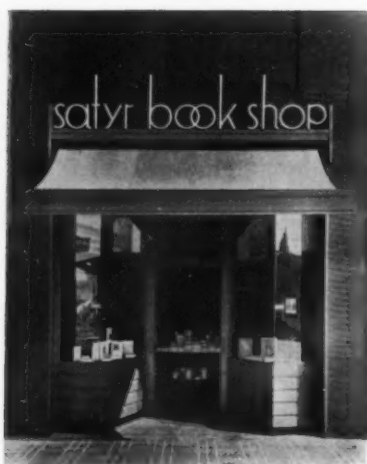
### THEATER FRONT DISPLAYS . . . . ROCKEFELLER CENTER, NEW YORK CITY



Photograph by Max Zimmerman



Louisville Grocery Survey Model Grocery Store, arranged by Carl Dipman, editor of The Progressive Grocer.



Morgan

A book shop in Los Angeles designed by J. R. Davidson.



Hedrich-Blessing

A furniture store façade designed by Howard T. Fisher, architect.

## WINDOWS

Window areas represent 12 to 40 per cent of total rent and are estimated to earn one-third of profit on all sales.

One-front windows are easiest to dress and light. Island windows are difficult to treat: elevator dressing is expensive, and display and lighting for observation on many sides create problems.

More floor area in window is gained and knee and toe room provided for window shopper if window and its frame can project from shop front.

Depth of window should be twice its width for satisfactory angular view on approach. For general purposes no window need be more than 8 feet high.

A two-level or second-floor display may be advisable for streets traveled by double-deck buses.

Stores selling wares with considerable size range will do well to have at least two separate window types. **Examples:** Women's wear: (1) gowns displayed on standing figures; (2) gloves and hosiery at hand height. Hardware: (1) stoves, lawn mowers, in larger window with low floor; (2) tools at hand height.

Consider access for window dresser, merchandise, cleaning and relamping.

Consider time-switch for window lights.

## REFLECTIONS

Superlighting (high intensity of illumination in daytime) seems the only solution but is expensive. Sloping windows do not solve problem satisfactorily.

Awnings will cut off most reflections from upper stories of buildings on other side of street but do not take care of bright street scene.

Consider all window floor and background materials to avoid distracting reflections of lighting equipment and window shoppers.

Use matte tile, travertine or similar non-polished materials.

Mirrors may be used on walls to increase apparent size of small displays but care is necessary to avoid distractions. Window dressing may also be made more difficult.

## TYPICAL DIMENSIONS FOR SHOW WINDOWS

Type	Depth (feet)	Height above sidewalk (inches)	Type of background	Remarks
Department store:	7-10	12-30	Closed	Interior wall valuable.
Automobile store:	10	Nearly level with sidewalk	Open into store	Disappearing window.
Furniture store:	10	Nearly level with sidewalk	Period	
Jewelry store:	12 $\frac{1}{3}$ -3	42-48	Low or closed	Miniature stage.
Books or stationery:	2-3 $\frac{1}{2}$	30	Low	
Florist shop:	3-5	12	Open or glass	Terraced tile with drainage and insulation.
Drug store:	2-2 $\frac{1}{2}$	36	Open	Show interior.
Hardware or paints:	2 $\frac{1}{2}$ -3 6	30 12	Closed	Two types.
Shoe store:	3-5	12-16 48	Closed or open	Exclusive shops may feature individual models in small windows.
Hat store:	2 $\frac{1}{2}$ -4	30-48	Closed or open	
Women's wear:	3-5	12 30	Screens, Venetian blinds or open	Two types.
Haberdashery or Tailor:	3-5	30 18	Closed	Two types.
Grocery store:	3-6	20-28	Low	Terraced tile with drainage and insulation.
Bakery or confectionery:	2-3	30	Closed, Glass	Insulation. Two levels.



## VENTILATION AND CONDENSATION

Awnings or marquees (naturally more expensive) are preferable to curtains or Venetian blinds for protection of merchandise since heat is dissipated outside of window. Venetian blinds are difficult to clean. Curtains will be required for closed days or during window dressing.

## VENTILATION AND CONDENSATION

Low velocity (non-fluttering) mechanical ventilation is desirable for show windows because of the extreme heat originating from lighting units.

Refrigeration may be necessary for foods or flowers.

Condensation may be prevented in winter by closed display with outdoor atmospheric conditions maintained within window. Various schemes such as dry air stream across window have been suggested.

Insulated platform will keep out basement heat. Radiators should be kept away from window backgrounds. No unfiltered air should enter window through vents in window frames or elsewhere.

Lighting units should be placed above window proper, behind glass panels, and ventilated to prevent excessive radiation of heat into display.

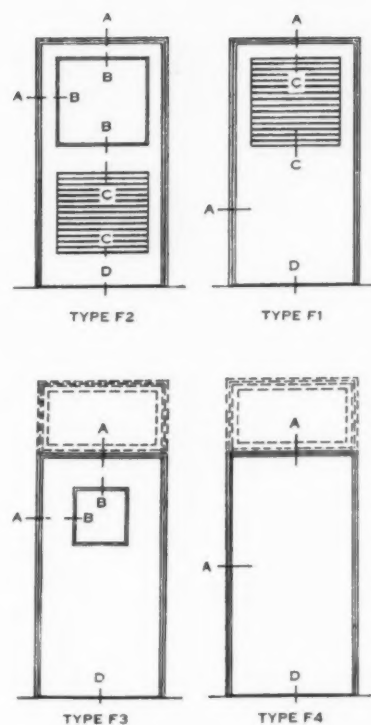
## MATERIALS AND CONSTRUCTION

Use only polished plate glass in non-corrodible metal frames as narrow as is commensurate with strength required. Frames should permit expansion and contraction of glass. One-quarter inch Glazing Quality is standard. Practical maximum area for one sheet is 250 square feet. Second Silvering Quality, the next better grade, is used in areas under 20 square feet, where such expense is justified.

Clips and plastic cement are preferable to wide corner posts where strength is not needed.

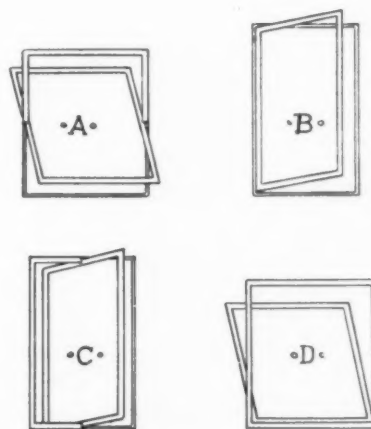
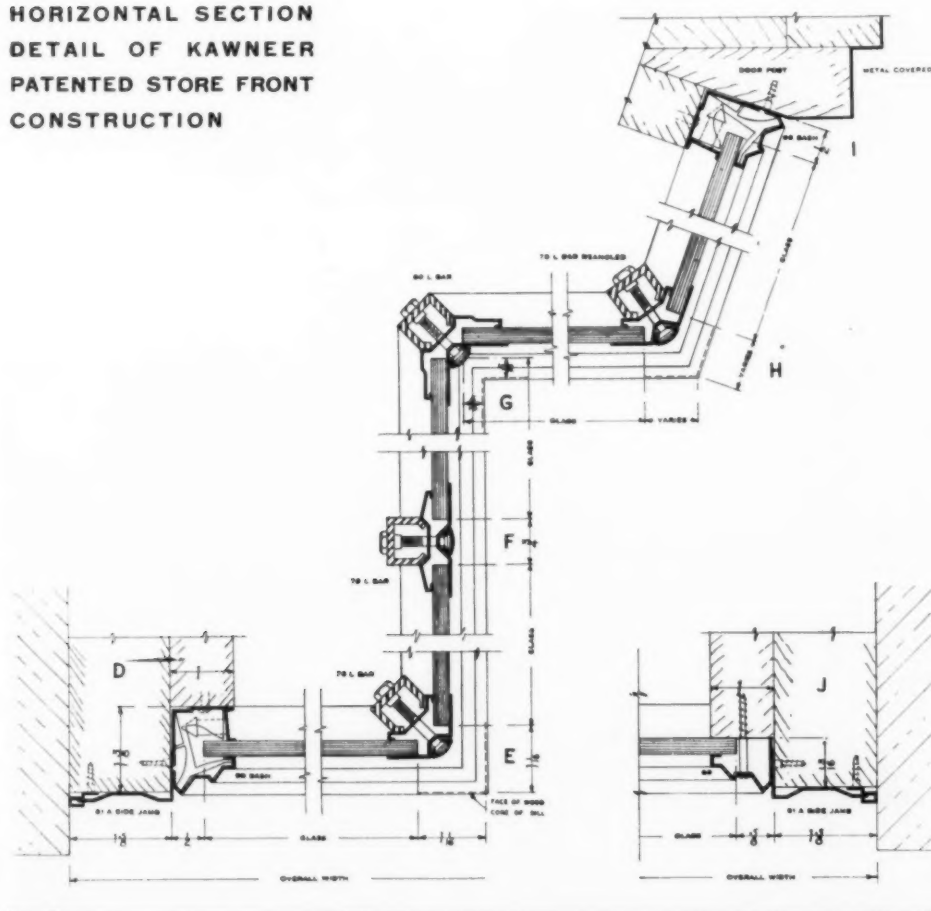
Consider method of concealing wiring which will permit easy inspection.

Also consider rolling grilles in front of window as protection against theft, damage during riots, or earthquakes.

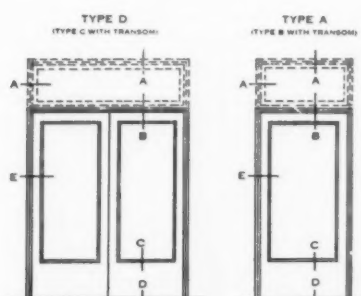


Kawneer flush-type doors fabricated of cold-rolled and extruded members.

HORIZONTAL SECTION  
DETAIL OF KAWNEER  
PATENTED STORE FRONT  
CONSTRUCTION



Kawneer pivoted ventilators. Maximum width of Types A, C and D, 30 inches; for Type B, 24 inches.



Kawneer welded tubular doors fabricated from stainless tubes of solid bronze or aluminum alloy.

## INTERIOR PLAN AND EQUIPMENT

Standards	Width	Length	Height
Ceilings:			
Basement .....			12-14 feet clear
Main floor .....			12-14 feet clear
Main floor with mezzanine .....			18-20 feet clear
Shop with mezzanine .....			15 feet clear
Minimum aisle .....	4 feet		
General show cases and counters .....	22-24 inches	4, 6, 8, 10, 12 feet	34-40 inches
Grocery wrapping counter .....	3 feet	4 or 6 feet	34-36 inches
Display Tables:			
Grocery .....	3 feet	4 or 6 feet	28-30 inches
Dry Goods .....	30-32 inches	7 feet	34 inches
Hardware .....	31-34 inches	5 feet 4 inches and 7 feet	32-35 inches
Drug .....	24-32 inches	Up to 7 feet	32-34 inches
Shelving:	Depth	Clear Height Between Shelves	Other Features
Grocery:			
General .....	12-18 inches	10-18 inches	Not over 6 feet high including 6-inch base. Shelves preferably adjustable.
Staples .....	18-24 inches	Lower shelf 20 inches Others 14 inches	
Hardware wall case with ledge and cabinet .....	30-36 inches		8 feet long 32 inches to ledge
Cabinet .....	20 inches		7 feet 6 inches high
Books .....	8-9 and 12 inches	10 and 14 inches	8 books/foot
Shoes .....	14 inches	9 inches (double row)	Boxes 6 inches wide
Millinery .....	14 inches	18 inches	Deep drawer under shelf
Dry Goods:			
Piece goods .....	26-28 inches	Shelves under ledge	30-34 inches to ledge
Men's and women's furnishings .....	10-18 inches		
Shelves under ledge, add .....	12-14 inches		

## REFERENCES, with acknowledgment for much of the data appearing in the check list:

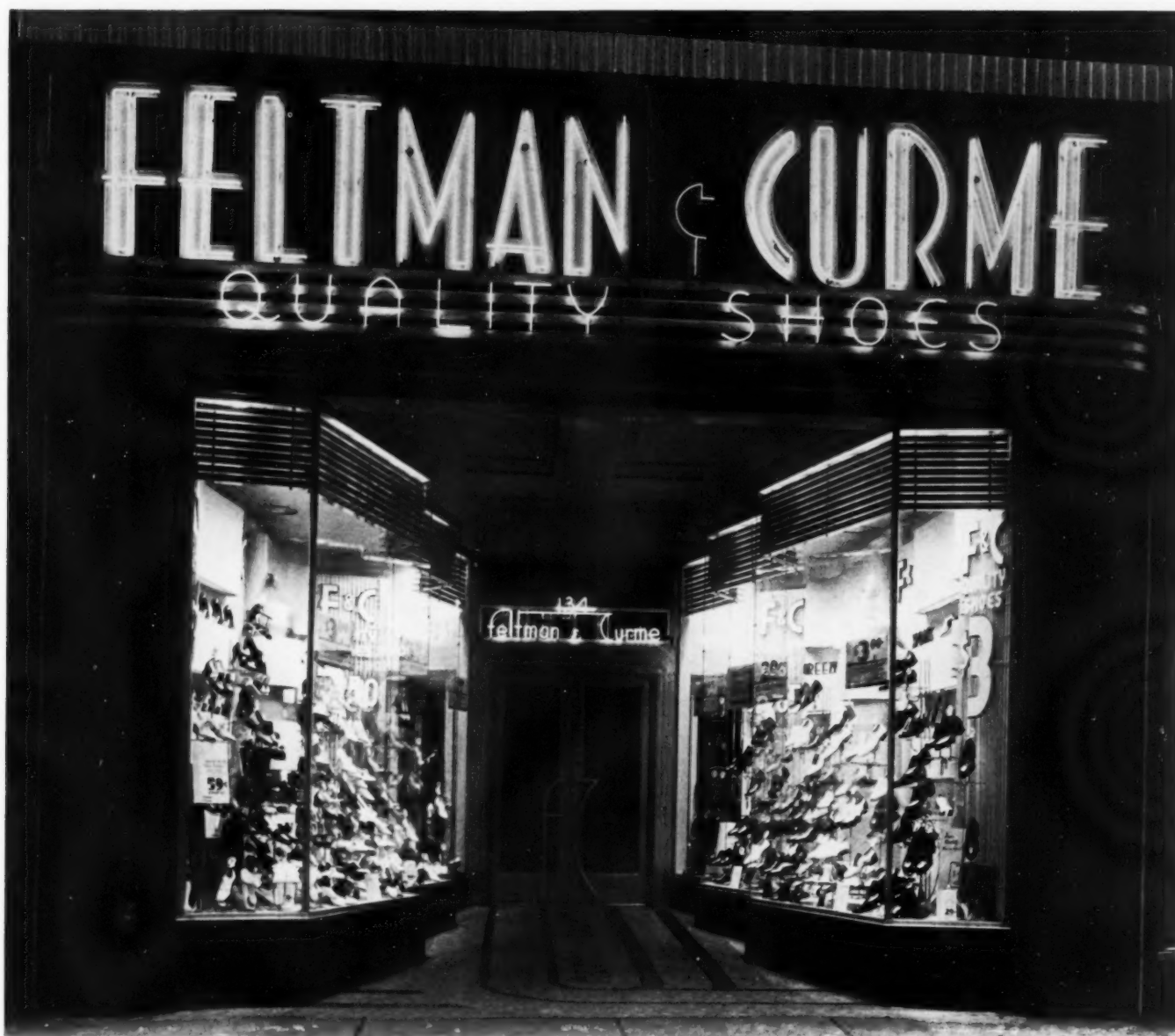
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Photograph by Hedrich-Blessina Studio



SHOE STORE IN CHICAGO  
KOENIGSBERG AND WEISFELT,  
ARCHITECTS

## SMALL SHOPS

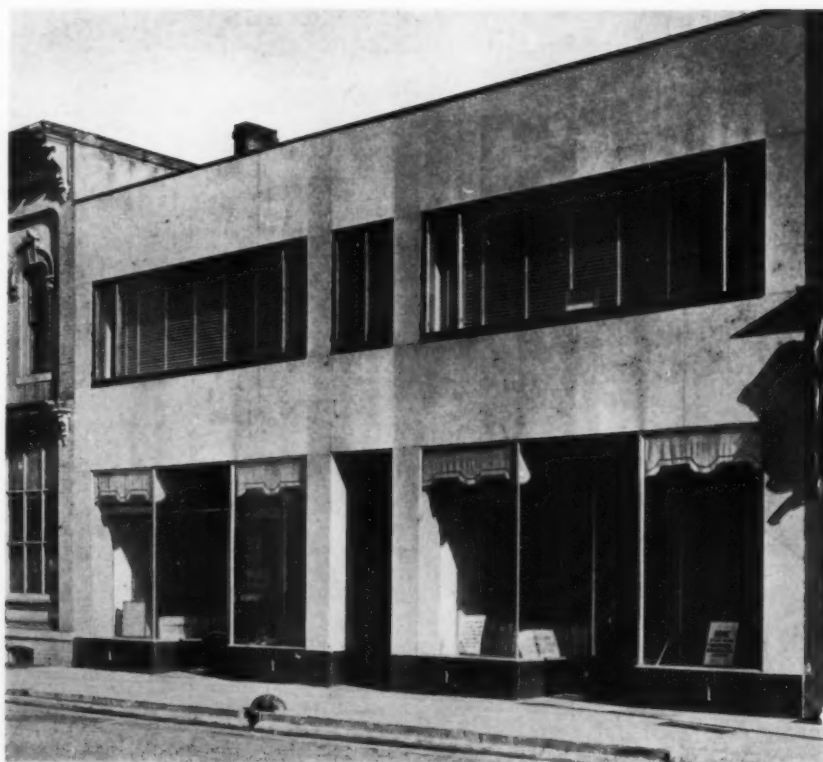


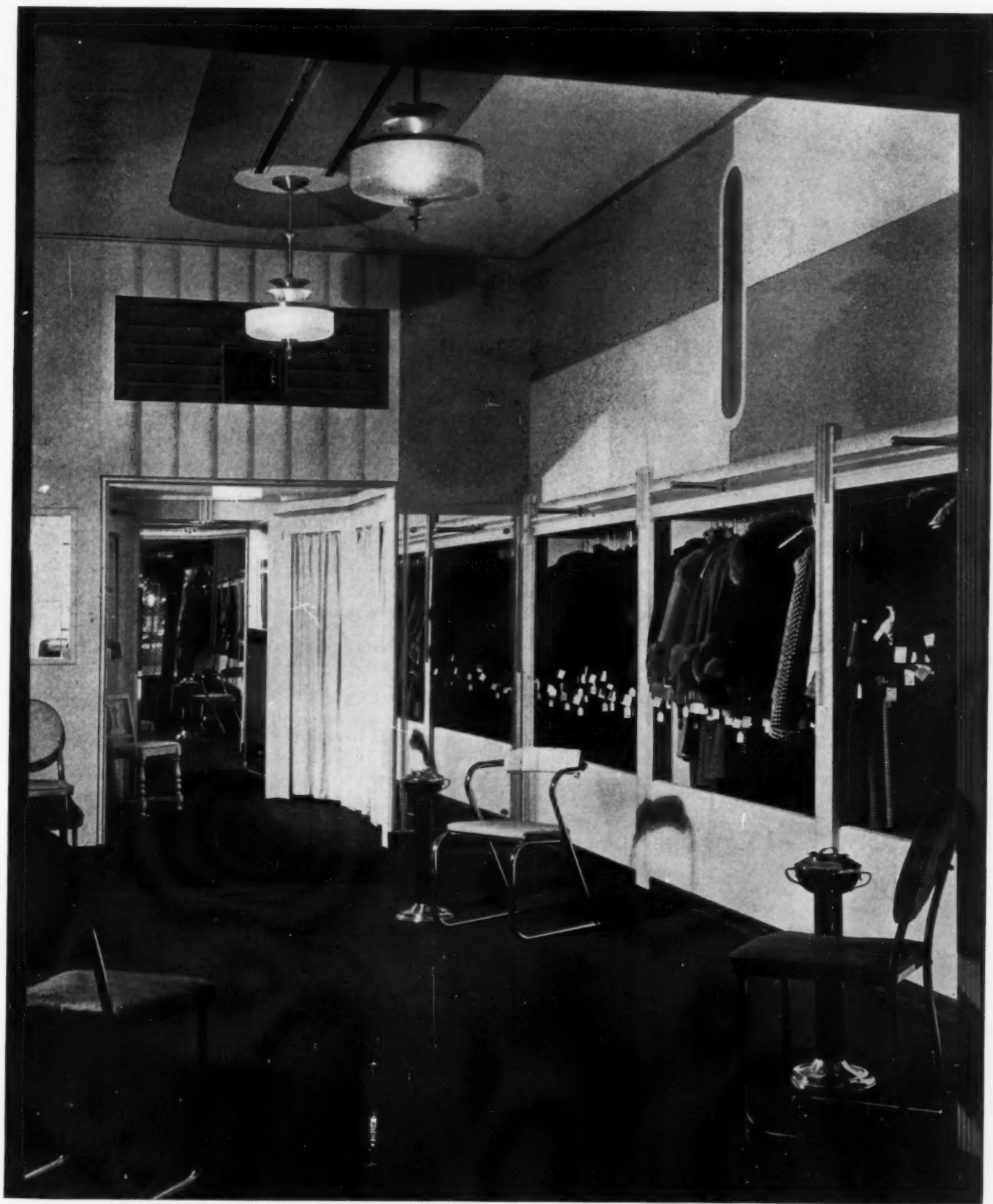


*Photograph by Hedrich-Blessing Studio*

**BERLAND'S SHOP, CHICAGO  
ARCHITECTURAL DEPARTMENT  
UNIVERSITY OF CHICAGO**

**HAFERMEISTER STORE BUILDING  
IN WATERTOWN, WISCONSIN  
GEORGE FRED KECK, ARCHITECT**



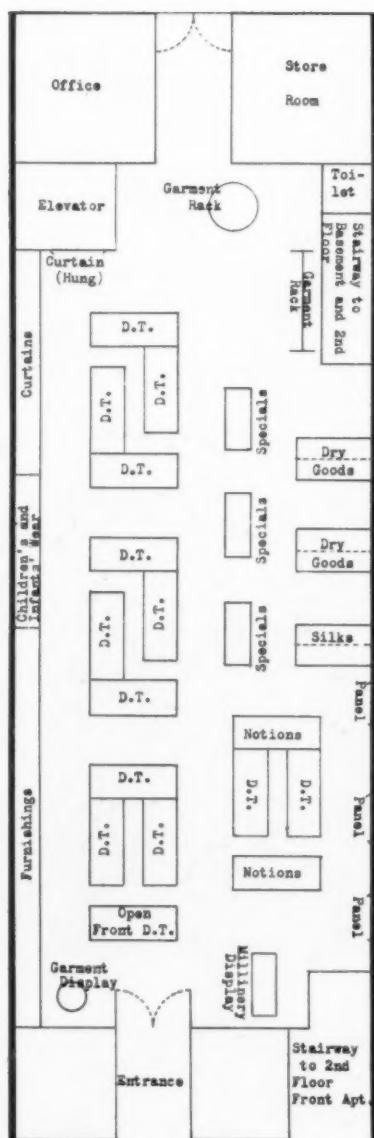


*Photographs by Hedrich-Blessing Studio*

BARNETT'S STORE IN HAMMOND, ILLINOIS . . . . . GORDON GUNDLING, DESIGNER

# THE APPAREL STORE

By KENNETH C. WELCH, Grand Rapids Store Equipment Company



FIRST FLOOR PLAN OF TYPICAL STORE—PREPARED BY WHOLESALE DRY GOODS INSTITUTE.

## AISLES

Clerks' aisles should be a minimum of 20 inches with about 2'2" to 2'3" as the ideal. Sometimes they are made slightly wider, up to 30 inches, but this depends somewhat on the degree of activity and whether customers have to go behind the counters to reach mirrors for fitting hats or to examine merchandise.

Customers' aisles may vary from a minimum of 4'6" to as great a width as the traffic determines, possibly up to 10 or even 12 feet in width.

## COUNTERS AND CASES

The counters should be 1'10" deep and 38 inches high for stand-up selling, and 34 inches, preferably with an overhang, for seating selling.

Drawers for storage vary a great deal with the type of merchandise. A small drawer about 4 inches high and 15 inches wide, fitting into a cabinet 1'10" deep, handles such items as women's hosiery, gloves, and other small wares.

Other important considerations in apparel stores are the size of the hangrod cases. In women's ready-to-wear the rods should be adjustable from the floor to the center of the rods: 60 inches for coats and the like, and up to 70 inches for evening dresses.

Men's clothing is carried double deck in a cabinet 7 feet high under the cornice, the one rod being removable and the top rod adjustable to take men's overcoats and top coats in season.

When open cabinets are used they can be as shallow as 2'4", but if disappearing doors are used they should be about 2'9" deep, and at least 2'6" or 2'7" deep with sliding doors.

## STORAGE

Stock rooms are planned to allow a 2-foot width for the hanging garments and a 2-foot aisle.

As a rule today apparel stores carry very little reserve stock, practically none in outer apparel although possibly some in small wares, such as hosiery and other standardized items.

## SERVICE SPACE

A combination locker is suggested for the storing of employees' garments. Two or four persons hang their coats and hats in a common locker, which provides small lockers with individual keys for purses and personal belongings. This arrangement not only saves floor space but also acts as a control against thefts.

Offices vary greatly with the type of the store and the individual type of business, depending on how much credit, how much cash, and how much clerical work is necessary.

Provisions should be made for such service departments as receiving and marking, delivery, workrooms for alterations for both men's and women's wear, ample fitting rooms.



## SHOW WINDOWS

The tendency today is to keep a rather low bulkhead for women's wear, possibly 14 to 18 inches, but in men's stores it is made higher, preferably 20 to 26 inches.

The window height is not important in women's stores and can be governed entirely by the exterior design. However, most men's stores prefer a comparatively low window, preferably not over 7 feet of glass with a 24-inch bulkhead. Sometimes it is made even lower by use of a valance.

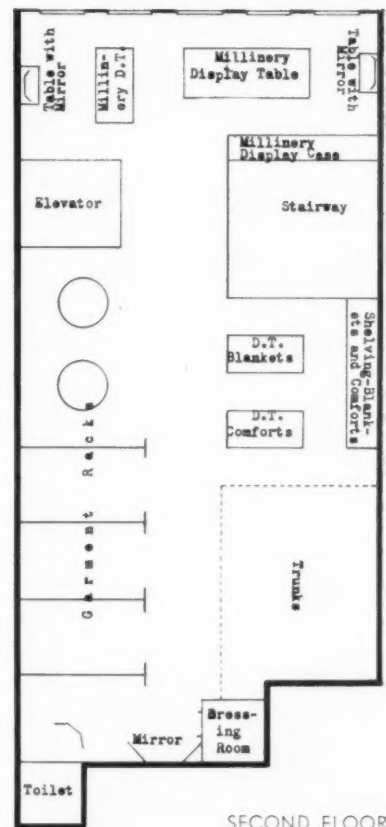
The tendency is to make the windows shallower for strictly apparel stores. Of course, department stores that may introduce furniture and carpets have to have deeper windows, at least 8 to 9 feet. However, in women's apparel stores, the depth can be from as shallow as  $3\frac{1}{2}$  or 4 feet up to 6 feet, depending on the width. Windows should not be too deep as compared to their width; the shallower window is more effective as the merchandise is naturally more visible from the street. Even shallower windows coming in front of columns are desirable today for small wares, such as hosiery, gloves and toilet articles, and if possible these should not be shallower than 10 or 12 inches, although if necessary an effective small wares display can be made in 7 or 8 inches.

In men's clothing stores a depth of 4 to 5 feet is customary and the windows should be separated by dividers or smaller windows with widths of 5 to 6 feet to obtain a number of unit displays featuring various color combinations.

A good position for the lights is directly above the window at the front. The illumination, however, should be concealed. If the window is in an arcade or visible from the side, some means should be used to prevent glare.

The windows should have ample easy access, particularly in smaller shops where large stocks are not carried and many times a day things must be taken out of the window to be sold.

The character of the background is, of course, a debatable subject. A light-colored background is desirable, either painted or in light-colored woods, and preferably dull rather than polished to prevent reflection of the lighting. One advantage of a light background is that it does introduce more light into the window and consequently reduces the reflection on the glass; a dark-colored background nearly always aggravates this reflection condition. Naturally, backgrounds should not be too ornate: the important function of any window is to display the merchandise properly and not to be too much of a feature in itself.



SECOND FLOOR

### Dimensions

Store -  $28\frac{1}{2}' \times 90'$  1st Floor  
 $28\frac{1}{2}' \times 60'$  2nd Floor

Tables in island arrangement -  $32" \times 7'$

## BRILL BROTHERS STORE, NEW YORK CITY... SHREVE, LAMB AND HARMON, ARCHITECTS



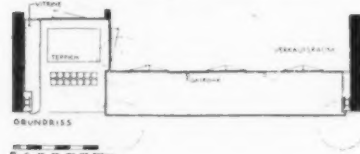
Photograph by F. S. Lincoln

# THE DRUG STORE

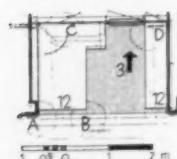
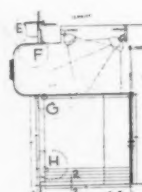
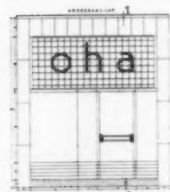
C. W. A. WOODBURN, Grand Rapids Store Equipment Co.



Perfume shop in Berlin, designed by O. R. Salvisberg, Architect.



A store in Basel, Switzerland, designed by Brauning, Leu & Durig, Architects.



Store in Dusseldorf, Germany, by Bernard Pfau, Architect.

Illustrations from LADENBAU

## AISLES

Clerks' aisles are usually 22 to 26 inches, depending on the roominess of the store. Customers' aisles vary usually from 4 to 5 feet in width, and are wider near the entrance or at converging traffic points. They should run as wide as 6 or 7 feet where the traffic is heavy.

## COUNTERS AND CASES

Standard sizes of show cases are 42 inches high and 24 inches wide. For narrow stores they may be 20 and 22 inches wide.

Counters are made 34 inches high and 24 inches wide. The lengths of both counters and show cases are 6 feet and 8 feet as a rule.

A display counter is made with a display section in front full height and about 8 inches deep; the total height of this counter is 42 inches over the display and 34 inches high over the wrapping ledge at the rear. The wrapping ledge is usually covered with linoleum and is made about 16 inches wide.

The slatted deck is usually placed about 18 inches below the top glass. From that point down to the base paneled woodwork is furnished, behind which there is storage space for cigar stock.

## CANDY CASES

These are made the same width as the other cases, but are usually 50 inches high and have sloping fronts. The tops are about 14 inches wide.

## DISPLAY TABLES

These are 33 $\frac{3}{4}$  inches high over the rim edge which projects up above the top; the top itself is 32 inches above the floor. The most popular sizes are 20 by 40 inches, 24 by 24 inches, 24 by 48 inches, 24 by 60 inches and 24 by 72 inches.

## CASHIERS' STATIONS

The body is made 42 inches high, with a plate glass screen above containing a hand pass, and with total height over-all of 58 inches. A cash drawer and two other drawers are placed in the rear above cupboards.

## DRUG WALL CASES

The upper sections are usually furnished with side sliding doors although some sections, particularly for patent medicines, are made without doors. The lower sections are made with wood-paneled doors or drawers or combinations of both. The ledge height of the lower section is 42 inches; total height over-all is 8 feet. The depth of the upper section is 12 $\frac{1}{2}$  inches, depth of the lower section 19 $\frac{1}{2}$  inches, lengths 6 feet and 8 feet. Some sections used for candy, toilet articles, gifts and the like, have a buffet recess above the ledge 14 inches high and glass doors above.

## TOBACCO WALL CASE SECTIONS

Open cigarette bins or compartments are furnished above the ledge with storage space behind. Glass doors are used above the ledge, and wood-paneled doors below.

## PREScription WALL CASES

Quite frequently a regular type of wall case is used with glass doors above and below the ledge, although there has been a tendency recently to use fixtures which will allow customers to view the prescription room. Such fixtures are made from 60 to 63 inches high; they have plate glass doors in the upper part and either wood-paneled doors or drawers in the lower. The depth of the upper and lower section is 12½ inches.

## SODA FOUNTAINS

Soda and lunch booths are made 42 inches high, 42 inches from front to back and from 4'8" to 5' long.

Fountain backbars are made with a variety of upper sections comprising diagonally veneered wood panels, mirror panels, cabinets for display and some panels which are located to give indirect lighting. These panels are made also for lights on the face. The indirect lighting effect, however, is more attractive if the lights are so placed as to throw the light over the area immediately in front of the mirrors. The lower sections comprise wood-paneled hinged doors, wood-paneled hinged doors and drawers, refrigerated sections, open sections for dishes, also sections for cutlery and urns. The measurements are quite similar to those given for wall cases except for the lengths. All fountain backbar sections are made in sections to permit assembling according to practically any backbar requirements.

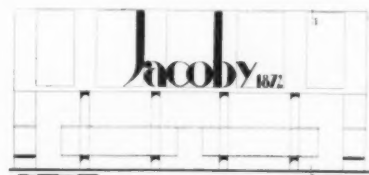
In large stores serving lunches it is often desirable to place the kitchen in the basement under the fountain and obtain service through a dumb-waiter. In stores of this type it is frequently a great advantage to have separate stock rooms for the main lines of merchandise such as tobacco, toilet articles, fountain supplies.

## PREScription WORKBOARDS

The lower section is 39 inches high and 24 inches wide, comprising drawers and cupboards. Oak is used for workboard ledges as it will withstand the destructive agencies of acids better than any other wood. Pull-out shelves are covered with Vitrolite for the mixing of pills and the like. Label drawers are also included. The depth of the upper shelving sections is 5¾ inches. Poison cabinets are inclosed by glass doors and furnished with locks. Drawer sections with narrow upright drawers for tinctures and other compounding material allow a large stock of small bottles to be carried in a small space.



A store in Budapest, designed by Ludwig Kozma, Architect.



Store in Frankfurt by H. Zweigenthal, Architect.

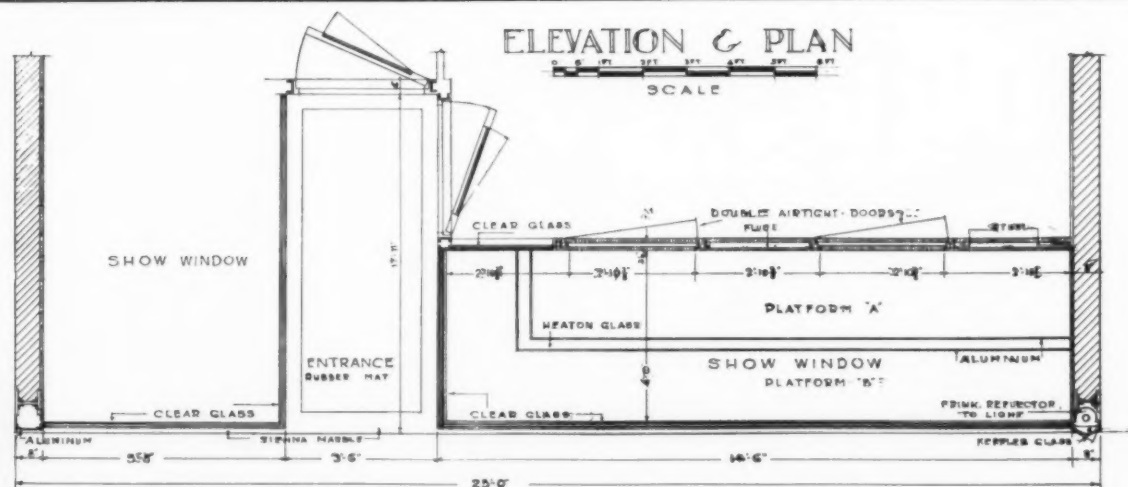
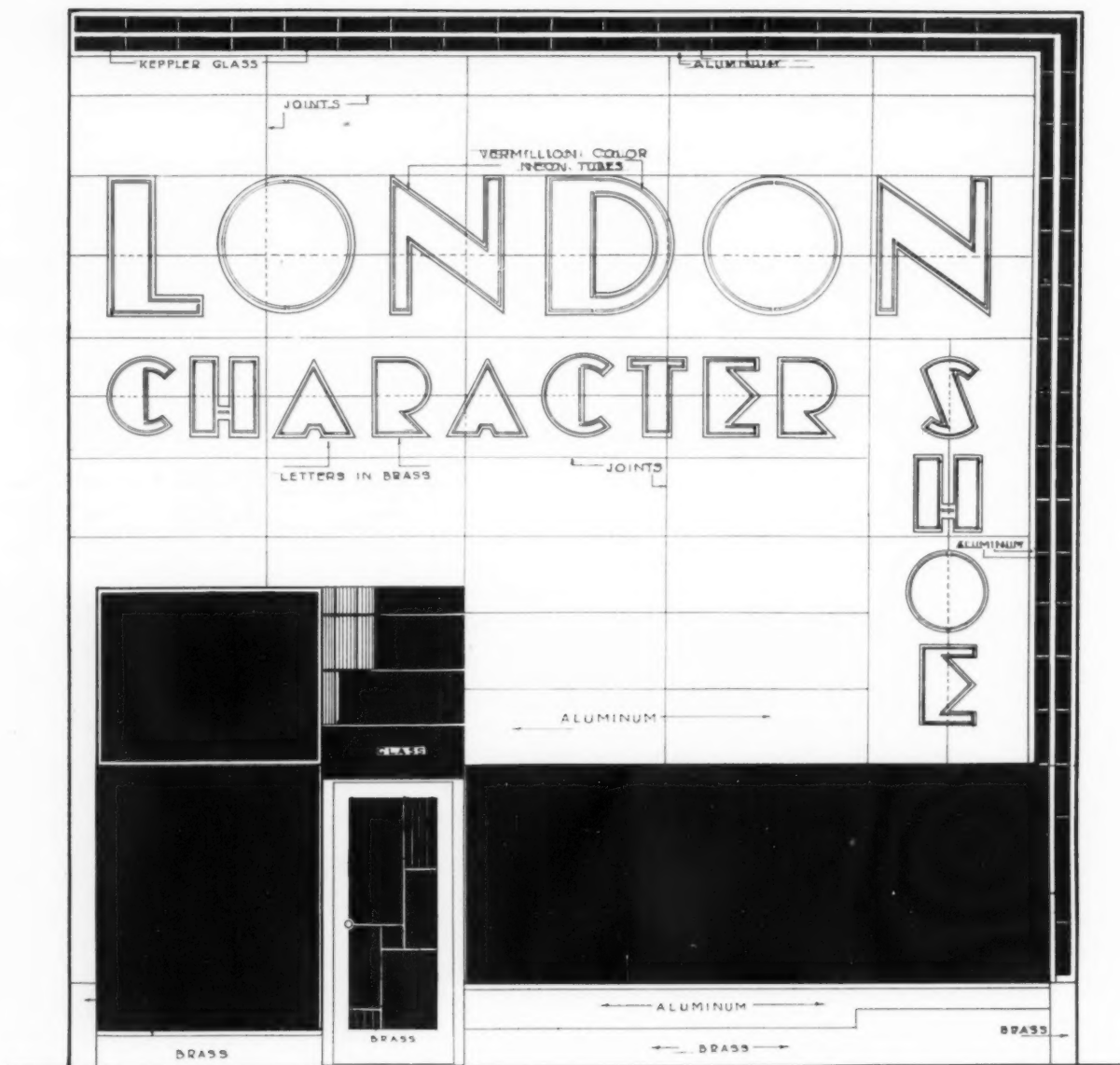
Illustrations from LADENBAU

DRUG STORE IN HOTEL ASTOR, NEW YORK CITY . . . . ALLMON FORDYCE, DESIGNER



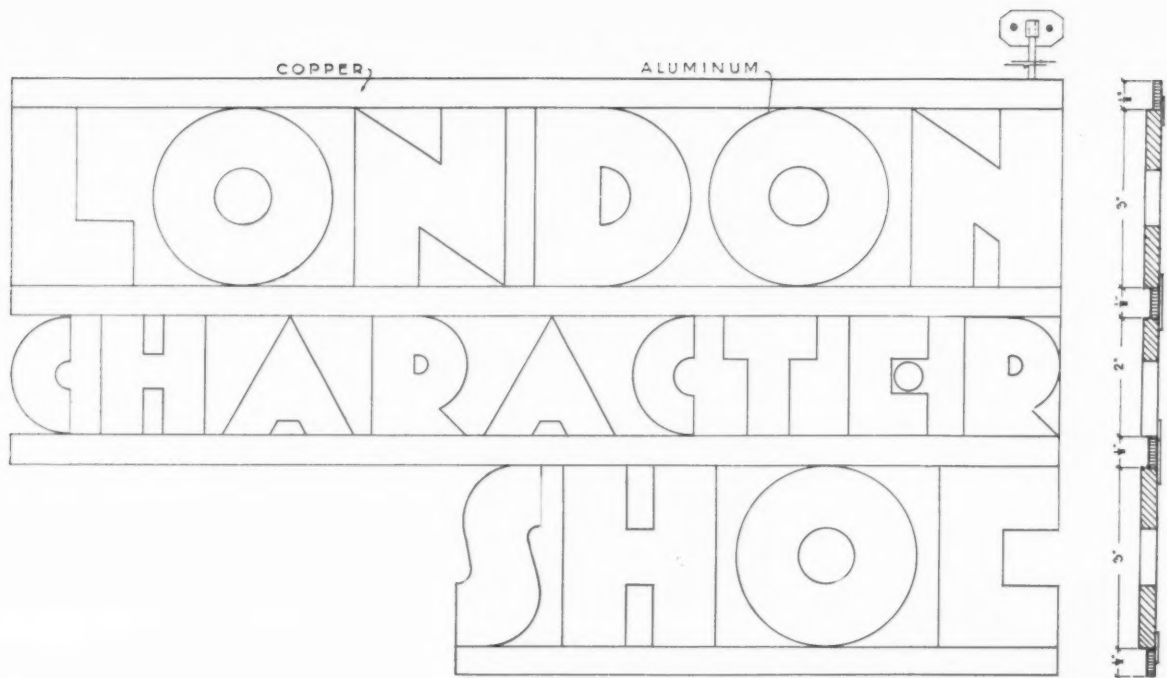
Photograph by Richard Garrison





SHOP FRONT AND LETTERING DESIGNED BY VAHAN HAGOPIAN

## STORE LETTERING



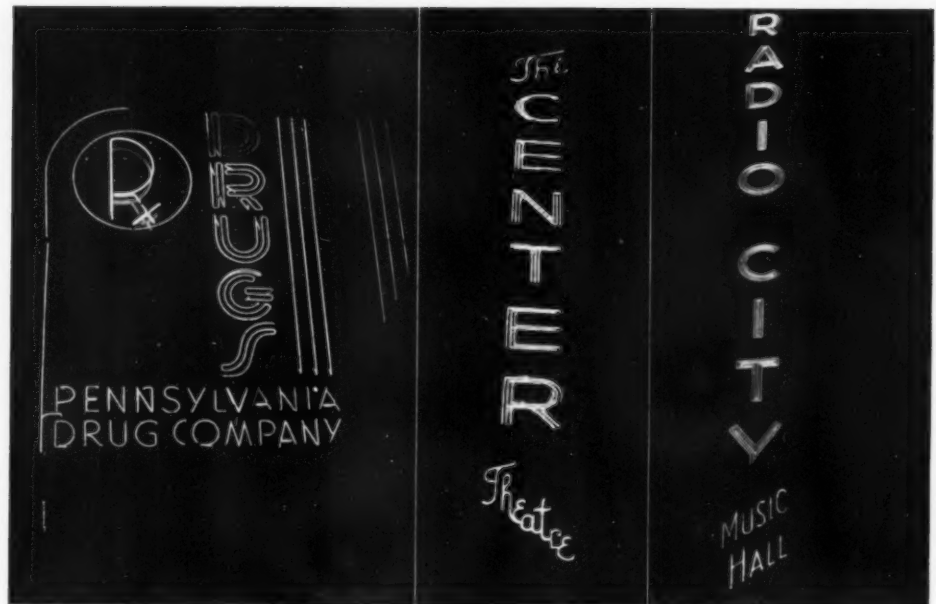
ALFA-DOMEIO  
HONORE PAYAN

LETTERING (BELOW) BY WALTER DORWIN TEAGUE

*Photograph by John Wallace Gillies, Inc.*

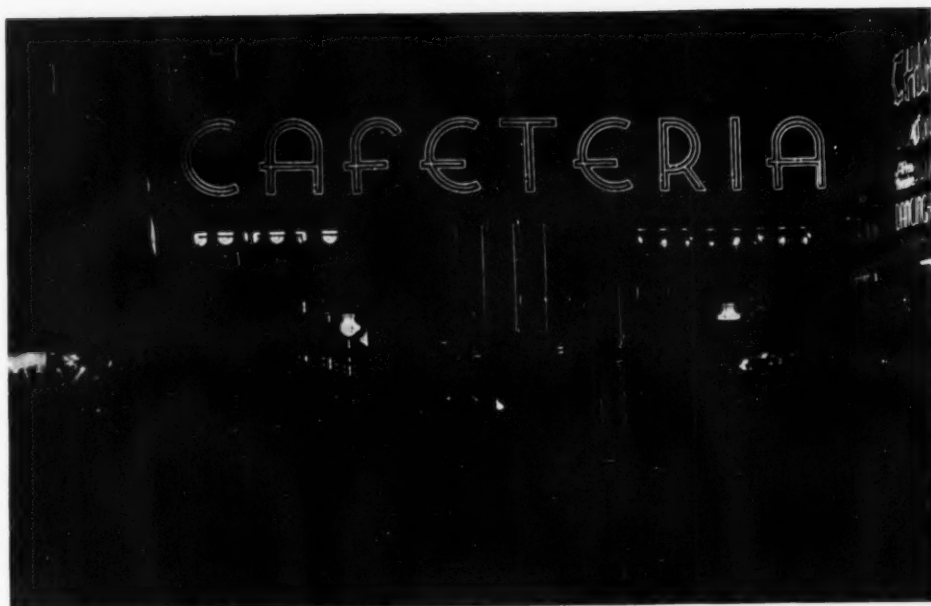
KODAK

STORE LETTERING

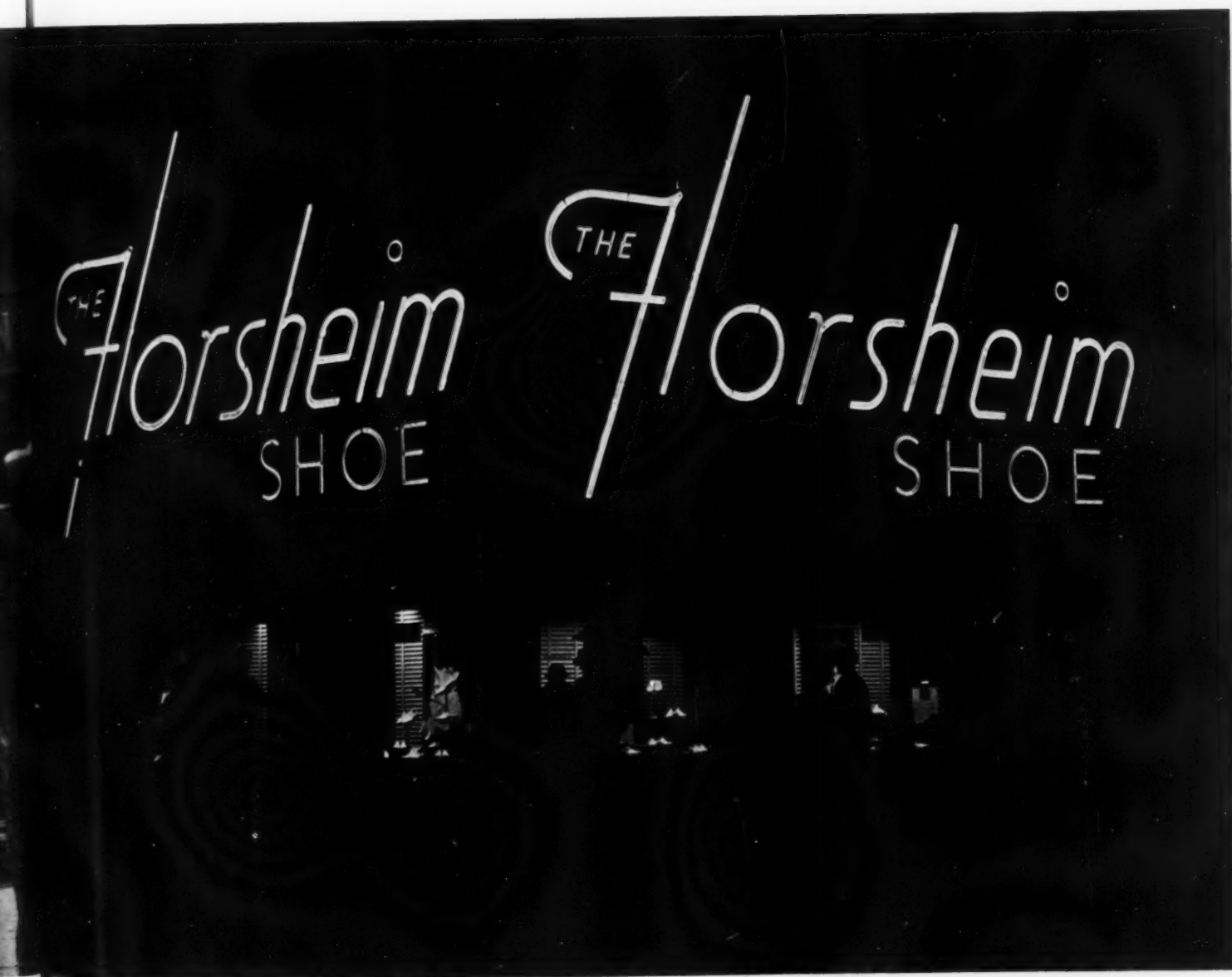


Photographs by Max Zimmerman



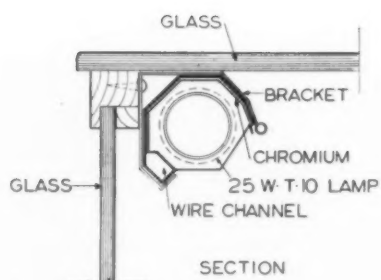


SEEN AT NIGHT



# STORE LIGHTING

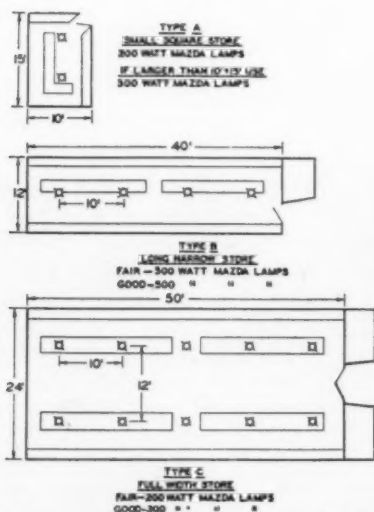
By HENRY L. LOGAN, Consulting Electrical Engineer



Courtesy, L. Erickson Electric Co.

SHOW CASE REFLECTOR DETAIL

SUGGESTED LIGHTING ARRANGEMENT TO PROVIDE RECOMMENDED LEVELS OF ILLUMINATION IN TYPICAL SMALL STORES.



Courtesy, Illuminating Engineering Society

THE full benefit of scientific lighting follows up on its special application to each individual case. The accompanying table is given as a general guide.

## LAMP SIZES FOR SHOW WINDOWS

LOCATION	LARGE CITIES			MEDIUM CITIES			SMALL CITIES		
	A	B	C	A	B	C	A	B	C
Whiteway District . . . . .	500	15"	yes	300	15"	yes	200	12"	yes
Business Thoroughfares . . .	300	15"	yes	200	12"	no	150	12"	no
Neighborhood Stores . . . . .	150	12"	no	150	12"	no	100	12"	no

A: LAMP SIZES IN WATTS—B: LAMP SPACING IN INCHES—C: FOOTLIGHTS

This table can be modified to take account of brilliant or dim street lighting, shallow, medium or deep windows and competition with neighboring stores.

The best remedy for daylight interference is the use of awnings to shut out the sun and sky, and double filament (200-300-500) watt lamps in efficient equipment to overcome the reflected brightnesses of the street scene. Burn both filaments in the daytime and the proper one (either the 200 or the 300 watt) after sundown.

Exposed equipment (individual reflectors mounted on wireways, conduit or fittings 12 inches apart) is cheapest and most generally used.

Lately the better stores have adopted the practice of placing individual reflectors flush in the window ceiling by the use of plaster rings and other fittings now available. A still further improvement coming into use is covering the opening of the reflector (and so concealing the lamp from the observer) with metal louvers, prismatic lenses or diffracting glass.





Courtesy, Holophane Co.

FOX STORE IN HARTFORD,  
CONNECTICUT—DESIGNED BY  
TAUSSIG AND FLESCH, ARCHITECTS

## STORE INTERIOR

The brightness of the show windows determines the minimum desirable level of illumination in the store. Stimulating windows will fail to entice customers into the store if the latter is dim by comparison. The store should therefore be lighted to at least 10 per cent of the show window level. For example, if the show windows are lighted to 250 foot-candles, the store intensity interior should be set at not less than 25 foot-candles. In no case should a store interior have less than 10 foot-candles.

## MINIMUM DESIRABLE LIGHTING LEVELS FOR SOME STORE INTERIORS

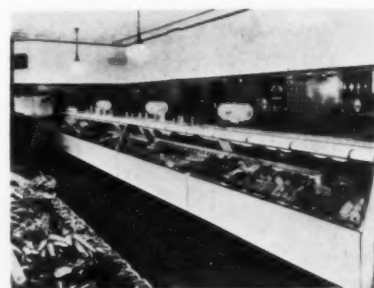
TYPE OF STORE	Foot-Candles on Merchandise	Foot-Candles in Self-Lighted Show Cases	Foot-Candles in Aisles and Traffic Areas
Apparel Stores	30	60	10
Drug Stores	20	40	5
Food Stores	20	40	5
Gas Stations			
(Show Rooms)	20	40	5
(Sales Rooms)			
Around Pumps	5		
General Outside Area	1		

High lighting levels are expensive for small stores during intervals between customers. A method of using a minimum level of general illumination in combination with a high level held in reserve, to be turned on only when the customer is present, has recently been developed. Concentrating lens or louver units are installed flush in the ceiling over each show case, and adjacent to wall display cases, controlled by noiseless mercury switches, concealed on the salesman's side of the aisle. When a customer approaches a case the salesman flips the inaudible switch and floods the display with a high intensity, turning it into a temporary attraction zone. This form of inexpensive high intensity lighting can also be controlled by photo-electric switches so that the light will operate when a customer approaches the merchandise, and go out again when he moves away, or by "capacity" switches operating in like manner.



Courtesy, Holophane Co.

Illumination in Allen's Jewelry Store in  
Syracuse, N. Y.



Courtesy, Johns-Manville

Interior of retail market. Walls finished  
with J-M Asbestos Flexboard in tile  
design.



## MODERNIZE MAIN STREET

The Modernize Main Street competition sponsored by Libbey-Owens-Ford Glass Company is creating widespread interest among architectural designers, among manufacturers supplying materials and equipment used in store design, and among Administration executives conducting the campaign for modernizing business and other property under loans insured up to \$50,000.

The competition was timed to coincide with the enactment of the bill amending the National Housing Act to permit insurance of modernization loans up to \$50,000. The amendment, approved May 28, authorizes loans for the purpose of (1) repair, alteration or improvement of real property already improved by, or to be converted into, apartment or multiple-family houses, hotels, office, business or other commercial buildings, hospitals, orphanages, colleges, schools or manufacturing or industrial plants, or (2) the purchase and installation, in connection with the foregoing types of property, of such equipment and machinery, with or without any structural changes in the buildings, as are peculiarly adapted to the business conducted therein or necessary to the operation thereof.

The amendment covers practically every type of structure not including private dwellings, which have been eligible for insurance of loans up to \$2,000 since last August. As of June 8 the Federal Housing Administra-

### FEDERAL HOUSING ADMINISTRATION

Washington

Stewart McDonald  
Acting Administrator

June 1, 1935

Mr. John D. Biggers, President,  
Libbey-Owens-Ford Glass Company,  
Toledo, Ohio.

Dear Mr. Biggers:

Your new "Modernize Main Street" Architectural Competition is a most constructive and timely development in the growing interest in modernization and reviving construction.

Your plan will stimulate the interest of many architects and builders and will encourage the specific action of business property owners throughout the country.

Widespread examples have already come to our attention of increased income resulting from modernization of business properties. The broadening of the National Housing Act to permit insured modernization loans on business property up to \$50,000 greatly increases the scope of the cooperation of the Federal Housing Administration.

Under the National Housing Act approved lenders, by complying with the regulations, may be insured up to 20% of the total loans made for improving business property and may be insured also against mortgage loans.

You may be assured of our fullest cooperation and our appreciation of the contribution you are making.

With every wish for the success of your program, I am

Sincerely,

(Signed) STEWART McDONALD

tion had, through community campaigns and other promotional activities, obtained pledges from home owners to spend \$428,541,779 for modernization and repair work, most of which has been or will be paid for without resort to insured loans. This total, made up of small jobs, is impressive enough to warrant the belief that the extension of modernization loan insurance authorized by the amendment to the National Housing Act will inaugurate a general revival in architectural practice. The Federal Housing Administration has plans for getting in touch with every property owner in the United States to acquaint him with the possibilities of modernizing for profit under the revised loan insurance plan.

There is reason to expect that modernization of stores will bulk large in the general rehabilitation of income-producing property. The Federal Housing Administration estimates that about 65 per cent of the retail stores of the country are in need of improvement. The Record shares the view that stores will figure largely in the modernization work encouraged by the enlarged loan insurance plan and began a research study of store check lists as soon as the bill was introduced in Congress. We take pleasure in being able to publish this study along with the full text of the timely Libbey-Owens-Ford Glass Company's Modernize Main Street Competition.

# **MODERNIZE MAIN STREET COMPETITION**

PROGRAM

Sponsored by **LIBBEY-OWENS-FORD GLASS COMPANY**

Conducted by **THE ARCHITECTURAL RECORD**

KENNETH K. STOWELL, A.I.A., Professional Adviser

Under a ruling by the Committee on Competitions  
of the American Institute of Architects, members  
of the A.I.A. are free to enter this competition.



PROGRAM

**“MODERNIZE MAIN STREET”  
COMPETITION**

Sponsored by LIBBEY - OWENS - FORD GLASS COMPANY

Conducted by THE ARCHITECTURAL RECORD

KENNETH K. STOWELL, A.I.A., Professional Adviser

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**\$11,000 IN CASH PRIZES**

(52 PRIZES IN ALL)

	<i>Total</i>
<b>FIRST PRIZE, for each Problem . . . . \$1,000</b>	<b>\$4,000</b>
<b>SECOND PRIZE, for each Problem . . . . 750</b>	<b>3,000</b>
<b>THIRD PRIZE, for each Problem . . . . 500</b>	<b>2,000</b>
<b>HONORABLE MENTIONS (40) . . . . 50</b>	<b>2,000</b>
	<hr/> <b>\$11,000</b>

**T**HE “Main Street” in every city, town, village or community usually has at least these four stores: the food store, the drug store, the apparel shop and the automotive sales-and-service station. These stores are chosen as the subjects of this competition and constitute the four problems from which the competitor may choose. Each store is to be modernized for modern merchandising methods which demand a store that attracts the public, displays goods to the best advantage, and provides space, convenience and light so that purchasing is a pleasure.

## GENERAL REQUIREMENTS

**T**HE store front with its plate glass show windows establishes the character of the store in the eyes of the passer-by. It must serve to make the passer *buy*, inviting him or her to stop and shop.

The interior must fulfill the promise of the front, serving as a background, and placing the merchandise in the foreground of the customers' consciousness. It must be convenient in arrangement for expeditious service, comfortable, easily controlled, adequate in all its appointments and consistent with the quality of the merchandise.

Space, equipment and facilities must be provided for all merchandising activities normally engaged in by the stores, such as receiving, marking, storing, preserving or protecting, displaying, selling, measuring, wrapping, delivering, accounting and recording, and the special operations or servicing that are implied by the type of goods to be sold. Locker, dressing and toilet facilities for employees must be provided, but may be in the basement if a stair is provided.

It is assumed that the stores are to serve an average American community, rather than the luxury class. While a photograph of the present store front or site is given for each type of store, it is shown merely to present uniform conditions for the competitors, as the problems are hypothetical only and are not intended to obtain designs for modernizing a particular existing store. The dimensions given are also hypothetical and for purposes of the competition only. The competitor may choose any appropriate names for the stores to use on signs or shop fronts. No show window shall extend beyond the lot lines. No sign shall extend more than 18" beyond the building line. The main signs will be legible from a point perpendicular to the store front. Skylights may be introduced in any part of the roof, if desired.

Any competitor may submit as many designs as he wishes as solutions of any or all problems, and each design is eligible for a prize, irrespective of other drawings submitted by the same competitor.

Complete freedom is given the competitors in regard to style, design, and the materials and methods of construction.

### COMPETITORS

Any architect, engineer, draftsman, or designer in continental United States is eligible to compete, except as noted below. Designers may associate or form groups to cooperate in the production of competition drawings. Each group is considered a single competitor.

No employee of the Libbey-Owens-Ford Glass Company, or of any other glass manufacturer, or of The Architectural Record, or the advertising agencies of the above, is eligible to compete.

### ENTRY BLANKS

The entry blank signifies merely the intention to compete. The blank should be sent promptly to Kenneth K. Stowell, A.I.A., *Professional Adviser*, care of The Architectural Record, 119 West 40th Street, New York, N. Y. The required outline specification sheet, title-pasters and name-pasters can be sent only to those who indicate their intention to compete.

### DATES

Competition opens, programs issued—June 15, 1935.

Competition closes, 5 P. M., August 12, 1935.

Judgment by the Jury, beginning August 26, 1935, until completed. Announcement of awards will be made at the close of the Judgment.

## JURY OF AWARD

The Jury consists of seven members; five architects and two experts in retail merchandising. The names of the jurors will be announced on August 12, 1935. The Judgment of the Jury shall be final.

## BASIS OF AWARD

Prizes will be awarded for the designs which, in the Judgment of the Jury, offer the best solutions to Problems as set forth in this program. The Report of the Jury will be made public as soon as practical after the Judgment.

## ANONYMITY OF DRAWINGS

The only mark of identification shall be the name of the competitor lettered in the lower righthand corner of the sheet in the space provided on the title-paster.

The opaque name-paster shall be firmly affixed on the edges only, as indicated, to cover the competitor's name. This paster will not be removed until the final judgment is completed and the awards are made.

The full name and complete address of the competitor shall be lettered in the space provided; lettering shall be at least  $\frac{3}{16}$ " in height. If the design is submitted by associates, the full names of all such associates must be given.

## DELIVERY OF DRAWINGS

Drawings shall be addressed to Kenneth K. Stowell, A.I.A., *Professional Adviser*, care of The Architectural Record, 119 West 40th Street, New York, N. Y. All drawings not delivered personally, or by messenger, shall be sent by mail, or by express (i.e., delivered to the post office or express office), not later than 5 P.M., August 12, 1935. All drawings delivered personally, or by messenger, shall be so delivered not later than 5 P.M., Eastern Daylight Saving Time, August 12, 1935.

Drawings must be securely wrapped and protected against bending or breaking. All designs are submitted at the competitor's risk. Reasonable care will be used in handling all drawings. Drawings which do not receive prize awards, or which are not reserved for publication or exhibition, will be returned to the competitors within a reasonable time, insured for \$50.

## AGREEMENT

The competitor (either an individual or group) in submitting the design, agrees that the drawing and design automatically become the property of the Libbey-Owens-Ford Glass Company in the event that the design is awarded a prize or an honorable mention, and further agrees that the Libbey-Owens-Ford Glass Company has the right to exhibit, or to publish, or to authorize the publication of any or all designs submitted in this competition.

## PUBLICATIONS AND EXHIBITIONS

No drawing shall be exhibited or made public until after the award of the Jury.

The name of the competitor and his address will be published in connection with any reproduction of his design authorized by the Libbey-Owens-Ford Glass Company, and the competitor's name and address will also appear on his design when and if said design is exhibited.

The Prize-Winning Designs will be published in The Architectural Record and other publications.

## COMMUNICATIONS

It is believed that the purpose, requirements and awards of the Competition are clearly stated and, therefore, in fairness to all competitors no questions regarding the Competition can be answered. Inquiries for additional copies of the program, outline specification sheets, title-pasters or name-pasters, shall be addressed to Kenneth K. Stowell, A.I.A., *Professional Adviser*, care of The Architectural Record, 119 West 40th Street, New York, N. Y.



# THE PROBLEMS

## PROBLEM "A"

The DRUG STORE

## PROBLEM "B"

The APPAREL SHOP

## PROBLEM "C"

The FOOD STORE

## PROBLEM "D"

The AUTOMOTIVE SALES-  
and-SERVICE STATION

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## PROBLEM "A"

The DRUG STORE

The modernized corner drug store is to provide for the selling of many types of small merchandise, as well as medicines and prescriptions. Among other things the following "departments" must be provided for: soda fountain and lunch counter, cigars, candy, toilet articles and cosmetics, proprietary medicines and home remedies, sick room supplies and rubber goods, packaged drugs, and prescriptions.

The kitchen for the lunch counter may be considered to be in the basement if proper stairs, conveyors or dumb-waiters and flues are shown on the plan.

*Dimensions.* The building is on a level corner lot 25'-0" x 75'-0", the short side on the north side of Main Street; the long side faces west on the side street. The east party wall extends 6" into store lot. The present clear height, floor to ceiling, 12'-0".



## PROBLEM "B"

### The APPAREL SHOP

**T**HE modernized apparel shop is to be devoted to the merchandising of women's wear, suits, dresses, hats, ensembles, gowns, lingerie and underthings, corsets, hose and accessories. The sale of shoes in this store is not contemplated. Among other things customer dressing rooms will be necessary.

*Dimensions.* The building covers a level inside lot (not a corner lot), 25'-0" x 75'-0" on the north side of Main Street. There is a service alley at the rear. The clear width between party walls is 24'-0". Party walls are 12" thick. The present clear height, floor to ceiling, is 12'-0".



## PROBLEM "C"

### The FOOD STORE

This store is to provide for the merchandising of groceries, packaged and canned foods, fresh fruits and vegetables, meats, fish and frozen foods.

*Dimensions.* The building covers a level inside lot (not a corner lot), 25'-0" x 75'-0" on the north side of Main Street. There is a service alley at the rear. The clear width between the party walls is 24'-0". The present clear height, floor to ceiling, is 12'-0".





## PROBLEM "D"

### The AUTOMOTIVE SALES-and-SERVICE STATION

**T**HE gas station, presumably, is to be modernized by an automobile dealer as a "feeder" for his main showroom, as well as to produce a profit through the sale of gasoline, oil, tires, accessories and parts. Servicing, such as greasing, washing and minor repairs on all makes of cars, will return a profit in addition to creating good-will which may lead to a car sale.

The plan shall provide a showroom for two low-priced passenger automobiles; space for the display and sale of tires, parts and accessories; cash and record space; "rest-room" toilets; one car-washing space; two greasing pits, hoists or lifts; work bench and tool racks for minor repairs, with inclosure for repairing one car at a time; gasoline pumps and oil dispensers shall be located within the building lines (no pumps or other structure are permitted at the curb of street). As customers drive in the travel of cars must be considered carefully to prevent traffic congestion and to provide maximum availability of the pumps.

The basement is not to be shown on the drawings. It is assumed that employees' lockers, the heating plant, air compressors, etc., and extra storage space may be provided for in the basement, providing a stairway is shown on the plan.

It is assumed that the present structure may be moved, enlarged, altered, or torn down so that the most efficient design for the lot can be realized. Gasoline pumps, also, may be added, changed or relocated.

*Dimensions.* The level lot is on the Northeast corner of intersection of Main Street and a through traffic artery. The wide Main Street runs East and West. The rectangular lot measures 100' on Main Street, 75' on the intersecting street. Both are two-way traffic streets. From building line (lot line) to curbs of streets is 12'.





# REQUIRED DRAWINGS

**A**LL drawings shall be undiluted black ink only, except the elevation which shall be in color. Drawings shall be on white stiff cardboard or illustration board, or heavily mounted opaque white paper, measuring 22 inches by 30 inches. A single line border shall be drawn to leave a margin  $\frac{3}{4}$ -inch wide around the entire sheet. The sheet shall be vertical, with the title at the bottom of the sheet within the border line. No hand-lettering of the title is necessary since a paster-title, to be attached to the drawing as directed, will be sent to each competitor who sends in an entry blank. *No lettering or numerals on any part of the sheet shall be less than  $\frac{1}{8}$ " in height.*

The following drawings are required on each sheet submitted as the solution of each Problem, i.e., Problem A, Problem B, Problem C, or Problem D.

## 1. PLAN

The plan of the main floor shall be shown.

The plan shall show store fixtures, show cases, furniture or store equipment. Uses of spaces shall be clearly indicated on the plan.

The plan shall be lettered so as to be easily read when the whole sheet is reduced to  $7\frac{1}{2}$  inches by 10 inches for reproduction in publications.

For Problems A, B, C and D, the scale of the plan shall be  $\frac{1}{8}"=1'-0"$ .

## 2. ELEVATION

Elevation of the store front and show windows shall be shown.

The elevation shall show the true colors, in flat washes or tempera, or, it is permissible to show colors and materials by the use of flat colored-papers, cellophane, metalized-papers and the like, providing they are so affixed to the drawing as to be permanent. No media shall be used which will flake or chip off, or smear, or smudge, or tear, or become loose, in handling. Conventional shadows may be cast to show relationships of planes or forms. No perspective, or false perspective, shall be shown; no indication of adjacent buildings shall appear; no figures, trees or other entourage shall appear on the drawing except one human figure,  $5'-10"$  in height, shall be shown at scale.

For Problems A, B and C, the scale of the elevation shall be  $\frac{1}{2}"=1'-0"$ .

For Problem D, the scale of the elevations shall be  $\frac{3}{16}"=1'-0"$ . Two elevations are required, one of each street front; both elevations shall be in color, and shall conform to conditions as stated above.

## 3. SECTION

One longitudinal section shall be shown. The section shall show store fixtures and furniture, decorative glass or mirrors, lighting, skylights (if any), thickness of roof construction, but shall indicate nothing below the main floor level. One human figure,  $5'-10"$  in height, shall be shown at scale.

For Problems A, B and C, the scale of the section shall be  $\frac{1}{4}"=1'-0"$ .

For Problem D, a section is required to be taken through the showroom. The scale of this section shall be  $\frac{3}{16}"=1'-0"$ .

## 4. STRUCTURAL DETAIL

The structural detail is required on each drawing submitted.

The structural detail shall show in section the construction of the show window, i.e., the bulkhead or base, the ceiling (including show window lighting), the sign and the awning box (if any). The structural detail shall be drawn in clear black undiluted India ink lines, without color or washes, scale  $3"=1'-0"$ .

This detail shall show the glass, the necessary blocking, and shall indicate the sash, jambs, head, transom bars, sills, awning bars, or bases, *in profiles only* (without showing details of patented or copyrighted constructions).

## 5. OUTLINE SPECIFICATIONS

The outline specifications shall list the materials and equipment to be used in the modernization. The list shall be typed, or neatly lettered, on the blank provided, and shall be firmly mounted on the back of the drawing in the center.

The outline specification is mandatory, but will not be a factor in the judgment of the solutions. It is intended to aid in the publishing of descriptions of the winning drawings.

## OUTLINE SPECIFICATION SHEET

This Outline Specification Sheet must be filled out and firmly pasted on the back of the drawing in the center. State materials, sizes, types, qualities.

- A. Glass for**
1. Show window
  2. Transoms
  3. Door
  4. Show window lighting troughs or fixtures
  5. Show window floor
  6. Show window ceiling
  7. Show window mirror
  8. Show case tops
  9. Show case fronts
  10. Show case shelving
  11. Show case mirrors
  12. Interior mirrors
  13. Interior decorative glass
  14. Interior lighting fixtures
  15. Interior lighting troughs
  16. Skylights (exterior)
  17. Skylights (interior or ceiling)
  18. Screens or cages
  19. Partitions
  20. Rear windows
  21. Other uses
- B. Store front frame**
- C. Facing of bulkhead**
1. Trim
- D. Facing of exterior wall, walls or columns**
1. Trim or ornament
- E. Facing of sign background**
- F. Sign lettering and illumination**
- G.**
1. Show window floor
  2. Show window walls
  3. Show window ceiling
- H. Sales Interior**
1. Walls
  2. Ceiling
  3. Flooring
  4. Show cases
  5. Furniture
  6. Main lighting fixtures
  7. Trim
- I. Type of heating, ventilating or air conditioning systems contemplated.**
- J. Other equipment**



# LEST YOU FORGET

## "MODERNIZE MAIN STREET" Competition

Sponsored by

**LIBBEY • OWENS • FORD  
GLASS COMPANY**

**\$11,000 in Cash Prizes**

**52 PRIZES—\$11,000 TOTAL**

**4 FIRST PRIZES—(one in each classification)—\$1,000 each—\$4,000**  
**4 SECOND PRIZES—(one in each classification)—\$750 each—\$3,000**  
**4 THIRD PRIZES—(one in each classification)—\$500 each—\$2,000**

In addition, there will be 40  
Honorable Mentions of \$50  
each. These will be awarded  
for meritorious designs, the

number of awards in each class  
depending on the number of  
worthy designs in each class  
as determined by the Jury.

● On June 15, the Program for the "Modernize Main Street" Competition was distributed to architects throughout the country. This Competition, sponsored by the Libbey-Owens-Ford Glass Company and conducted by the Architectural Record, with Kenneth K. Stowell, A.I.A., as Professional Advisor, is in reality four simultaneous competitions, each calling for the modernization of a particular type of shop or store—(1) A Food Store; (2) A Drug Store; (3) An

Apparel Shop; (4) An Automotive Sales and Service Station. A photograph of each shop to be modernized, together with all necessary data, is published in the Program. A complete

(Competition closes 5 P. M. August 12, 1935)

copy of the Program appears in this issue of The Architectural Record in the preceding pages. If you have not already sent in your entry, the blank below will bring you the title-paster and other necessary data and information. The competition closes August 12; the Jury meets August 26, 1935.

## USE THIS ENTRY BLANK

KENNETH K. STOWELL, A. I. A., Professional Advisor,

"Modernize Main Street" Competition

The Architectural Record, 119 West 40th Street, New York, N. Y.

Gentlemen: I desire to enter the "Modernize Main Street" Competition sponsored by the Libbey-Owens-Ford Glass Company. Please send me the title-paster and all necessary data and information.

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Profession or occupation \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_





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**N**OTE in the shower illustrated, the offset head which permits the bather to adjust the temperature of the water before entering the bath. These showers are designed for use in schools, gymnasiums, country clubs and similar places.

We also have designed special types of gang and runway showers. These showers are usually furnished with Anystream Self-Cleaning heads which will never stop up. Plungers in the head permit adjustment of the shower sprays affording a means of effecting water economy.

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K-3100—Speakman Built-in Mixometer Shower

## **FEATURES**

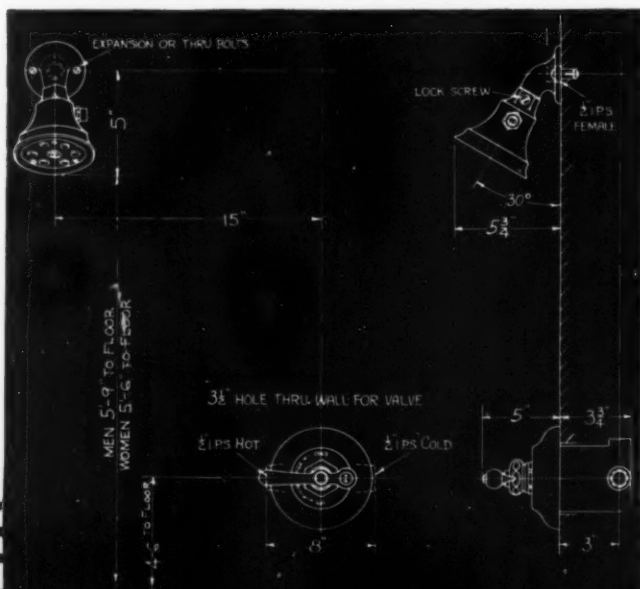
Vandal-proof; rigidly and securely bolted to wall.

All valve parts subject to wear are renewable.

Head is Anystream Self-Cleaning type. Lock-screw prevents malicious removal.

Offset head permits tempering water before entering shower.

Speakman chromium finish on all plated parts.



Detail of K-3100

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House at Nutley, N. J. Architect, C. C. Wendebach, New York City. Walls painted with Cabot's Old Virginia White. Roof stained with Cabot's Creosote Shingle Stains.

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## NEW JERSEY HOUSING SURVEY

(Continued from page 36, Editorial Section)

of marriages which are being deferred until business recovery becomes more evident. Owing to the difficulty of any quantitative evaluation, these factors are omitted from consideration in this analysis. Nevertheless, when these are considered in conjunction with the indications of the foregoing analysis, it will be seen that the analyses of the potential conditions of the housing and real estate market are in no sense overdrawn or an overstatement.

There has been much discussion recently on the entrance of the Federal Government into the field of housing. Many opponents have held that should the Federal or State Government acquire land, construct, own and operate housing projects, this would compete with private initiative and capital and hence act as a deterrent on general economic recovery. It is not possible to draw conclusions for the entire United States, but based upon the findings of the portions of the New Jersey Real Property Inventories which are tabulated, the major objections to the entrance of the Federal Government into the housing field do not seem valid. In the first place, if the Federal Government, in cooperation with the State, undertakes slum-clearance and low-cost housing projects restricted in occupancy to those in the lowest income brackets, the figures clearly indicate that there is a very large field for this type of work.

Seven per cent of all dwelling units in the 65 cities and communities thus far tabulated either rent for \$15 or less a month or are valued at \$1,500 or less. At least 10 to 12 per cent of all dwelling units in this sample of the State are substandard to a degree warranting replacement and 5½ per cent are absolutely so far gone in deterioration or obsolescence as to be deemed unfit for human occupancy. In other words, the Federal Government could readily replace, in the sixty-five cities studied, about 30,000 family units, since they are absolutely unfit for occupancy, while on a comprehensive slum-clearance program about 50,000 to 60,000 dwelling units should be demolished and rebuilt, at a total estimated cost of nearly \$200,000,000, allowing \$3,500 per dwelling or family unit.

Private enterprise in the past has not entered this portion of the housing field. Those in the lower income groups in the past have had to content themselves with housing accommodations which have been abandoned by other and more fortunate citizens. This whole group of the less fortunate families and individuals has never been able to pay sufficient rent to afford profits and incentives for private capital to provide them with facilities designed for their use. At a time when construction volume is at low ebb even for residential construction for the wealthier citizens, it does not seem logical or reasonable to suppose that private capital will seek an outlet in a field into which it has not ventured in the past.

On the other side of the picture there is every indication that an ample field for the activity of private enterprise and capital will develop as soon as public confidence returns with credit and other facilities available.